```
100.0%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1996-139709/14.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hepatitis C virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-PSDB; AAT16661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 191 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HCV infection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15-AUG-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO9605315-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-AUG-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   02-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22-FEB-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    hepatitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAR92987;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HCV; El;
                                                                                                                                                                                                                                                                                                                                                                                                                     AAR92987
                                                                                                                                                                                                                                                                                                                                                                                                                                       Aar92987 Hepatitis
Aar92972 Hepatitis
Aar92973 Hepatitis
Aar92973 Hepatitis
Aar92976 Hepatitis
Aar92976 Hepatitis
Aar92977 Hepatitis
Aar92977 Hepatitis
Aar92978 Hepatitis
Aar92978 Hepatitis
Aar92978 Hepatitis
Aar92978 NANB hepatitis
Aar92978 NANB hepatitis
Aar92978 Hepatitis
Aar9298 Hepatitis
Aar9298 Hepatitis
Aar9298 Hepatitis
Aar9298 Hepatitis
Aar9298 Hepatitis
Aar9298 Hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hepatitis
Hepatitis
Hepatitis
Hepatitis
Hepatitis
Hepatitis
Human hep
HCV Core
                                                                                            ; Search time 70 Seconds (without alignments) 1055.303 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                              .......CSFSIFLLALLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Aar92939 H
Aar92940 H
Aay94411 H
Adj10436 H
Adj10438 H
                                                                                                                                                                                                                                                                                                                  2105692
5.1.6
Compugen Ltd.
                                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                               2105692 segs, 386760381 residues
GenCore version
Copyright (c) 1993 - 2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                               Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                             protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAR74048
AAR74047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAR96546
AAR22137
AAR38278
AAR24440
AAR70230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAR92938
AAR92941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAR92937
AAR92939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAR92972
AAR92974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAR92976
AAR92977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADJ10436
ADJ10438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAR66995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAR44010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAR92940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAR92987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAR92953
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAR92978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4AR92973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAY94411
                                                                                              July 15, 2005, 09:24:38
                                                                                                                                                                                                                             BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                              MSTLPKPORKTKRNTNRRPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                geneseqp1980s:*
geneseqp1990s:*
geneseqp2000s:*
geneseqp2001s:*
geneseqp2003as:*
geneseqp2003as:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Geneseg 16Dec04:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                geneseqp2004s:*
                                                                                                                                                            US-09-084-691B-206
                                                                                                                                                                                                                                                                                                                                                 length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ဝတ္ထာက်လုလုလုလုလုလုလုလုလ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \begin{smallmatrix} \mathbf{0} & \mathbf{0} & \mathbf{0} & \mathbf{0} & \mathbf{0} & \mathbf{0} \\ \mathbf{0} & \mathbf{0} & \mathbf{0} & \mathbf{0} & \mathbf{0} & \mathbf{0} \\ \mathbf{0} & \mathbf{0} & \mathbf{0} & \mathbf{0} & \mathbf{0} & \mathbf{0} \\ \mathbf{0} & \mathbf{0} & \mathbf{0} & \mathbf{0} & \mathbf{0} & \mathbf{0} \\ \end{smallmatrix}
                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing:
                                                                                                                                                                                                                                                                                                                                                 Beg
Seg
                                                                                                                                                                            Perfect score:
                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

9000

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  981
                                                               •
                                                             OM protein
                                                                                                                                                                                                                                                                                                                                                 09
08
                                                                                                                                                                                                Sequence:
                                                                                                                                                                                                                                                                               Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Database
                                                                                                                                                                                                                                                                                                                                               Minimum
                                                                                                                                                                                                                                                                                                                                                              Maximum
                                                                                              Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
```

```
        26
        976
        93.4
        502
        2
        AAR67591
        Aar67591 Hepatitis

        27
        976
        93.4
        967
        2
        AAR79222
        Aar79222
        PHCV141-e

        29
        976
        93.4
        1648
        2
        AAR7921
        Aar7921 HCV16-e

        30
        976
        93.4
        1648
        2
        AAR7921
        Aar7921 HCV16-e

        31
        976
        93.4
        1648
        4
        AAR00449
        Aar7921 HCV16-e

        32
        976
        93.4
        2984
        4
        AAR00447
        Aae00447
        Aae00442 Hepatitis

        33
        976
        93.4
        2002
        7
        ADM44822
        Adm24822 Hepatitis

        34
        3012
        7
        ADM44822
        Adm24020 HCV genom

        35
        976
        93.4
        3011
        2
        AAR40120
        Aar40120 HCV genom

        36
        976
        93.4
        3011
        2
        AAR79232
        Aar70119 HCV genom

        37
        976
        93.4
        3011
        2
        AAR79232
        Aar70119 HCV genom

        3
```

ALIGNMENTS

ARR92987 standard; protein; 191 AA.

XX
ARR92987;
XX
CARR92987;
XX
C2-OCT-1996 (first entry)
XX
Hapatitis C virus isolate HK2 core protein.
XX
W Heyatitis C virus.
XX
Hapatitis Mapatitis Mapatitis HCV infection.
XX
Hapatitis C virus.
XX
Hapatitis Mapatitis Mapatitis HCV infection.
XX
Hapatitis Mapatitis Mapatitis HCV infection.
XX
Hapatitis Mapatitis Mapatitis Mapatitis HCV in a sample, the primars are cuseful for detecting the presence of HCV infection.
XX
Hapatitis Mapatitis Mapatitis HCV infection.
XX
Hapatitis Mapatitis Mapatitis Mapatitis HCV infection.
XX
Hapatitis Mapatitis Mapatitis Mapatitis HCV infe

Score 1045; DB 2; Length 191; Pred. No. 2.6e-90;

180

```
RROPIPKAROPOGRHWAOPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA and amino acid sequence of HCV envelope 1 and core proteins - used to determine HCV genotype and as vaccines against HCV infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAR92936-R92987 are HCV core proteins derived from 52 different HCV isolates. Isolated cDNA sequences are used for the prodn. of primers useful for detecting the presence of HCV in a sample, the primers are also useful for HCV genotyping. Proteins encoded by the cDNAs can be used in vaccines for immunising against HCV infection. The proteins may also be used to detect antibodies against HCV in serum, saliva, lymphocytes or other mononuclear cells. The antibodies may be used in the prevention of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KVIDTLICGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                            KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          envelope 1; core protein; HCV genotyping; antibody; vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        `.
6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 191;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 982; DB 2; Length 12. Pred. No. 2.2e-84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5; Mismatches
                                                                                                                                                                                                                                                    Hepatitis C virus isolate Z1 core protein.
                                                                                                                                                                              Ź
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        English
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Purcell RH;
                                                                                                                                                                              AAR92974 standard; protein; 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94.0%;
93.7%;
                                                                                                                                                                                                                                                                                                                                                                                                             94US-00290665.
                                                                                                                                                                                                                                                                                                                                                                                       95WO-US010398
                                                                                                                                                                                                                                                                                                                                                                                                                                     DEPT HEALTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 4; Page 212; 340pp;
                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                             191
                                                                                                                  LLSCLTVPASA 191
                                                                                             LLSCLTTPASA
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Miller RH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 1996-139709/14.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                               Hepatitis C virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-PSDB; AAT16648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 191 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                     (USSH ) US SEC
                                                                                                                                                                                                                                                                                                                                                                                       15-AUG-1995;
                                                                                                                                                                                                                                                                                                                                                                                                             15-AUG-1994;
                                                                                                                                                                                                                                                                                                                                       WO9605315-A2
                                                                                                                                                                                                                             02-OCT-1996
                                                                                                                                                                                                                                                                                                                                                               22-FEB-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        179;
                                                                                                                                                                                                                                                                                         hepatitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                              121
                                                                                                                                                                                                      AAR92974;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                     61
                                                                                             181
                                                                                                                   181
                                                                                                                                                                                                                                                                            HCV; E1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bukh J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Loca
Matches
                                                                                                                                                        RESULT 3
                                                                                                                                                                    AAR92974
                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                 g
                                                                                                                 셤
                셤
                                             ò
                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAR92916-R92987 are HCV core proteins derived from 52 different HCV isolates. Isolated CDNA sequences are used for the prodn. of primers useful for detecting the presence of HCV in a sample, the primers are also useful for HCV genotyping. Proteins encoded by the CDNAs can be used in vaccines for immunising against HCV infection. The proteins any also be used to detect antibodies against HCV in serum, saliva, lymphocytes or other monouclear cells. The antibodies may be used in the prevention of
                                                                      120
                                                                                                                     180
                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               t
                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                       9
                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA and amino acid sequence of HCV envelope 1 and core proteins - used determine HCV genotype and as vaccines against HCV infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                      RRQPI PKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG
                                                                                                                     KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                   envelope 1; core protein; HCV genotyping; antibody; vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ..
0
 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 191;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 996; DB 2; Lu
Pred. No. 1.1e-85;
4; Mismatches 6;
0; Mismatches
                                                                                                                                                                                                                                                                                                                              Hepatitis C virus isolate Z4 core protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 4; Page 210-211; 340pp; English.
                                                                                                                                                                                                                                                       Ź
                                                                                                                                                                                                                                                      AAR92972 standard; protein; 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                              95WO-US010398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     94US-00290665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 94.8%;
Matches 181; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (USSH ) US SEC DEPT HEALTH
                                                                                                                                                                                                                                                                                                      (first entry)
 191; Conservative
                                                                                                                                                                    LLSCLTTPASA 191
                                                                                                                                                                                      LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1996-139709/14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Miller RH,
                                                                                                                                                                                                                                                                                                                                                                                        Hepatitis C virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-PSDB; AAT16646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 191 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HCV infection
                                                                                                                                                                                                                                                                                                                                                                                                                WO9605315-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                15-AUG-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15-AUG-1994;
                                                                                                                                                                                                                                                                                                      02-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                        22-FEB-1996
                                                                                                                                                                                                                                                                                                                                                                 hepatitis.
                                              -
                                                                      61
                                                                                              61
                                                                                                                                            121
                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                     Ξ;
                                                                                                                      121
                                                                                                                                                                                                                                                                             AAR92972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bukh J,
 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                       a
                                                                                                                     ò
                                                                                                                                          g
                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                      ò
```

ö

Gaps

```
hepatitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                   AAR92953;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAR92978
                                                                                                                                                                                                                               HCV; El;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bukh J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAR92978
                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    isolates. Isolated cDNA sequences are used for the prodn. of primers useful for detecting the presence of HCV in a sample, the primers are also useful for HCV genotyping. Proteins encoded by the cDNAs can be used in vaccines for immunising against HCV infection. The proteins may also be used to detect antibodies against HCV in serum, saliva, lymphocytes or other mononuclear cells. The antibodies may be used in the prevention of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
121 KVIDTLTCGFADLMGYIPLVGAPVGGVARALAHGVRAVEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MSTNPKPQRKTKRNTNRRPMDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA and amino acid sequence of HCV envelope 1 and core proteins - used determine HCV genotype and as vaccines against HCV infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MSTLPKPORKTKRNTNRRPTDVKFPGGGOIVGGVYLLPRRGPRLGVRATRKTSERSOPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                envelope 1; core protein; HCV genotyping; antibody; vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAR92936-R92987 are HCV core proteins derived from 52 different HCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 191;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 982; DB 2; Le
Pred. No. 2.2e-84;
5; Mismatches 7;
                                                                                                                                                                                                                                                                                                                 Hepatitis C virus isolate Z8 core protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 4; Page 211-212; 340pp; English.
                                                                                                                                                                                     Æ
                                                                                                                                                                                   AAR92973 standard; protein; 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Purcell RH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  94.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                95WO-US010398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       94US-00290665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEPT HEALTH.
                                                                                                                                                                                                                                                                        (first entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 93.7
Matches 179; Conservative
                                                                181 LLSCLTTPASA 191
                                         LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LLSCLTVPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1996-139709/14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bukh J, Miller RH,
                                                                                                                                                                                                                                                                                                                                                                                                                  Hepatitis C virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-PSDB; AAT16647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 191 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (USSH ) US SEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HCV infection
                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO9605315-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15-AUG-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15-AUG-1994;
                                                                                                                                                                                                                                                                        02-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22-FEB-1996
                                                                                                                                                                                                                                                                                                                                                                                hepatitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                        E1 ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                         181
                                                                                                                                                                                                                               AAR92973;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           음
                                                                                셤
                                                                                                                                                                                                           $\circ{\circ}{\circ}\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\circ$\cir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
셤
                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
```

```
AAR92936-R92987 are HCV core proteins derived from 52 different HCV isolates. Isolated CDNA sequences are used for the prodn. of primers useful for detecting the presence of HCV in a sample, the primers are also useful for HCV genotyping. Proteins encoded by the CDNAs can be used in vaccines for immunising against HCV infection. The proteins may also be used the codetect antibodies against HCV in serum, saliva, lymphocytes or other monounclear cells. The antibodies may be used in the prevention of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   - used to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 RRQPIPKARQPEGRIWAQPGYPWPLYGNEGMGWAGWLLSPRGSRPNWGPIDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MSTNPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                         envelope 1; core protein; HCV genotyping; antibody; vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA and amino acid sequence of HCV envelope 1 and core proteins determine HCV genotype and as vaccines against HCV infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 981; DB 2; Length 191;
Pred. No. 2.8e-84;
5; Mismatches 7; Indels
                                                                                                                                                                 Hepatitis C virus isolate HK3 core protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 4; Page 194-195; 340pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAR92978 standard; protein; 191 AA.
AAR92953 standard; protein; 191 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Purcell RH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        94US-00290665.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      93.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                95WO-US010398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (USSH ) US SEC DEPT HEALTH
                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 93.7
Matches 179; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Miller RH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1996-139709/14.
N-PSDB; AAT16627.
                                                                                                                                                                                                                                                                                                            Hepatitis C virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 191 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HCV infection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15-AUG-1994;
                                                                                                                                                                                                                                                                                                                                                                 WO9605315-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15-AUG-1995;
                                                                                                            02-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                            22-FEB-1996.
```

9 9

- used to

RH;

Purcell

HEALTH

```
DNA and amino acid sequence of HCV envelope 1 and core proteins determine HCV genotype and as vaccines against HCV infection.
                                                                                                                                                                                                                               Claim 4; Page 214; 340pp; English
                                                                                 95WO-US010398
                                                                                                     94US-00290665
                                                                                                                         DEPT
                                                                                                                                                                  WPI; 1996-139709/14.
N-PSDB; AAT16650.
                                                                                                                                              Miller RH,
                    Hepatitis C virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hepatitis C virus.
                                                                                                                                                                                                                                                                                                                                               Sequence 191 AA;
                                                                                                                         (USSH ) US SEC
                                                                                                                                                                                                                                                                                                                           HCV infection
                                                                                 15-AUG-1995;
                                                                                                      15-AUG-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO9605315-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      02-OCT-1996
                                                            22-FEB-1996
hepatitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hepatitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAR92977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HCV; El;
                                                                                                                                              Bukh J,
 임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                          isolates. Isolated cDNA sequences are used for the prodn. of primers useful for detecting the presence of HCV in a sample, the primers are also useful for HCV genotyping. Proteins encoded by the cDNAs can be used in vaccines for immunising against HCV infection. The proteins may also be used to detect antibodies against HCV in serum, saliva, lymphocytes or other mononuclear cells. The antibodies may be used in the prevention of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                              DNA and amino acid sequence of HCV envelope 1 and core proteins - used to determine HCV genotype and as vaccines against HCV infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KVIDTLTCGFADLMGYIPVVGAPVGGVARALAHGVRLLEDGVNYATGNLPGCSFSIFLLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RROPIPKAROPOGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RROPI PKAROLEGRSWAOPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPNDPRRRSRNLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HCV; E1; envelope 1; core protein; HCV genotyping; antibody; vaccine;
                                                   core protein; HCV genotyping; antibody; vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                 AAR92936-R92987 are HCV core proteins derived from 52 different HCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 191;
                                                                                                                                                                                                                                                                                                                                                                                                                               Score 980; DB 2; Length 19
Pred. No. 3.5e-84;
4; Mismatches 8; Indels
                              Hepatitis C virus isolate DK13 core protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hepatitis C virus isolate 26 core protein.
                                                                                                                                                                                                                                                                                            Claim 4; Page 215-216; 340pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ą
                                                                                                                                                                                                            Purcell RH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAR92976 standard; protein; 191
                                                                                                                                              95WO-US010398
                                                                                                                                                                   94US-00290665
                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 93.7%;
Matches 179; Conservative
                                                                                                                                                                                        (USSH ) US SEC DEPT HEALTH
         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LLSCLTVPASA 191
                                                    ;
                                                                                                                                                                                                                               WPI; 1996-139709/14.
N-PSDB; AAT16652.
                                                                                                                                                                                                           Miller RH,
                                                    envelope
                                                                                Hepatitis C virus
                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 191 AA;
                                                                                                                                                                                                                                                                                                                                                                                        HCV infection
                                                                                                      WO9605315-A2
                                                                                                                                              15-AUG-1995;
                                                                                                                                                                   15-AUG-1994;
         02-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  02-OCT-1996
                                                                                                                           22-FEB-1996
                                                               hepatitis.
                                                   E1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAR92976
                                                                                                                                                                                                            Bukh J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAR92976
 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
```

```
120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
AAR92936-R92987 are HCV core proteins derived from 52 different HCV isolates. Isolated cDNA sequences are used for the prodn. of primers useful for detecting the presence of HCV in a sample, the primers are also useful for HCV genotyping. Proteins encoded by the cDNAs can be used in vaccines for immunising against HCV infection. The proteins may also be used to detect antibodies against HCV in serum, saliva, lymphocytes or other monopurclear cells. The antibodies may be used in the prevention of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MSTNPKPQRKTKRNTNRRPMDVKFPGGGOIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 RRQPIPKARRSEGRSWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPNDPRRRSRNLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RRQPI PKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA
                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MSTLPKPORKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       envelope 1; core protein; HCV genotyping; antibody; vaccine;
                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                               Score 978; DB 2; Length 191;
Pred. No. 5.3e-84;
5; Mismatches 8; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hepatitis C virus isolate Z7 core protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ą.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAR92977 standard; protein; 191
                                                                                                                                                                                                                                                                                                                     93.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 93.2
Matches 178; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LLSCLTVPTSA 191
```

```
The sequence is that of a synthetic nucleotide sequence encoding the hepatitis C virus nucleocapsid protein. The gene is positioned in a vector for efficient expression in prokaryotic cells. The expressed protein can be used in tests for the detection of antibodies specific for the HVV C protein. See also AAR74047. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KVIDTLICGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MSTIPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60
                                                                                                                        expression of a synthetically produced protein coding DNA - les the hepatitis C virus nucleo-capsid protein which can be
                                                                                                                                                                                                                                                                                                                                                                                                                     1 MSTLPKPQRKTKRNTNRRPTDVKPPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hepatitis C virus, vector; expression; prokaryotic cells, detection;
diagnosis.
                                                                                                                                                                                                                                                                                                                                                       Score 977; DB 2;
Pred. No. 6.8e-84;
5; Mismatches 9
                                                                                                                                    pref. encodes the hepatitis C virus nucl
used in the detection of HCV antibodies.
              HEALTH & HUMAN SERVICES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (USSH ) US DEPT HEALTH & HUMAN SERVICES,
                                                                                                                                                                                 Disclosure, Page 37; 44pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ź
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic HCV nucleocapsid protein,
                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAR74047 standard; protein; 196
                                                                                                                                                                                                                                                                                                                                                        93.5%;
92.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      94WO-US012166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                       Matches 176; Conservative
                                           Khudyakov Y, Fields HA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LLSCLTVPASA
                                                                        WPI; 1995-178872/23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1995-178872/23.
                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                      N-PSDB; AA092071
              DEPT
                                                                                                                                                                                                                                                                                                                           Sequence 196 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Khudyakov Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25-OCT-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25-OCT-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO9511980-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25-MAR-2003
26-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       04-MAY-1995
              ΩS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAR74047;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                        Vector
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAR74047
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                               DNA and amino acid sequence of HCV envelope 1 and core proteins - used to determine HCV genotype and as vaccines against HCV infection.
                                                                                                                                                                                                                                                                        AAR92936-R92987 are HCV core proteins derived from 52 different HCV isolates. Isolated cDNA sequences are used for the prodn. of primers useful for detecting the presence of HCV in a sample, the primers are also useful for HCV genotyping. Proteins encoded by the cDNAs can be used in vaccines for immunising against HCV infection. The proteins may also be used to detect antibodies against HCV in serum, saliva, lymphocytes or other mononuclear cells. The antibodies may be used in the prevention of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RROPIPKAROPOGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hepatitis C virus; vector; expression; prokaryotic cells; detection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 191;
                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 977; DB 2; Length 19.
Pred. No. 6.68-84;
                                                                                                                                                                                                                                           Claim 4; Page 214-215; 340pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAR74048 standard; protein; 196 AA
                                                                                                                     Purcell RH;
                           95WO-US010398
                                                        94US-00290665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               94WO-US012166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            93US-00141917,
                                                                                                                                                                                                                                                                                                                                                                                                                                                  93.5%;
93.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic HCV nucleocapsid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 93.2
Matches 178; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LLSCLTVPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (revised)
                                                                                     DEPT
                                                                                                                                                WPI; 1996-139709/14.
N-PSDB; AAT16651.
                                                                                                                   Bukh J, Miller RH,
                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 191 AA;
                                                                                     (USSH ) US SEC
                                                                                                                                                                                                                                                                                                                                                                                       HCV infection
                         15-AUG-1995;
                                                        LS-AUG-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9511980-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-OCT-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25-OCT-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25-MAR-2003
26-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                04-MAY-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAR74048;
```

g ઠે 윱 ò d 8 g

δ

ö

Gaps

;

Length 196; 9; Indels

```
the sequences and the sequences are sequences and the sequences are sequences and the sequences and the sequences are sequences and the sequences of the sequence of the sequence of types 9, 10 or 11. The sequences correspon to the 5' untranslated region (UR), the Core/E1, NG or NSSB regions of the genome. This sequence represents amino acids 1-317 from the HCV types 9a and 7a isolates RR1. The new HCV types were isolated from patients with chronic HCV from the Benelux countries, France, Cameroon and Vietnam, because of their aberrant reactivities. The RNA was extracted, cDNA synthesised and their aberrant reactivities. The RNA was extracted, cDNA synthesised and viruses into (sub) types based on comparison with known sequences. The sequences were used to generate the peptides ARN96424-R96524. The sequences can also be used to synthesise probes and primers for the detection of HCV in a sample. The polypeptides can be used to detect anticement of the HCV typing or to prevent HCV infections
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hepatitis C virus; non-A non-B virus; HCV-Hc59; antigen; vaccine; assay;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 RRQPIPKVRQPTGRSWGQPGYPWPLYGNEGCGWAGWLLSPRGSRPNWGPNDPRRRSRNLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MSTLPKPQRKTKRNTNRRPMDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG
                                                                                                                                                                                                                                                                                                                             sequences AAR96526-R96578 represent novel sequences isolated from
                                                                                                                                                                                   Hepatitis C virus poly:nucleic acid unique to unidentified sub:type - used to develop probes and primers for new sub:types and vaccines to prevent and treat infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 977; DB 2; Length 319;
Pred. No. 1.2e-83;
3; Mismatches 9; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HCV-Hc59 capsid and envelope proteins.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAR22137 standard; protein; 326 AA.
                                                                                                                                                                                                                                                                                    Claim 25; Fig 3; 150pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         veery watch 93.5%;
Best Local Similarity 93.7%;
Matches 179; Conservative 3
95EP-00870076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ||||||||||||
LLSCLTTPASA 191
                                           (INNO-) INNOGENETICS NV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Non-A.
non-B hepatitis virus.
                                                                                                                              WPI; 1996-251460/25.
                                                                                                                                                     N-PSDB; AAT27957.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 319 AA;
  28-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27-AUG-2003
25-MAR-2003
                                                                                      છે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-JUL-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               detection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAR22137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAR22137
  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                         for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RROPIPKAROPOGRHWAOPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 RROPIPKVRRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 KVIDTLTCGFADLMGYIPLVGAPLGGAARALAHGVRVLEDGVNYATGNLPGCSFSIFLLA 180
                                                                                                                                                                   The sequence is that of a synthetic nucleotide sequence encoding the hepatitis C virus nucleocapsid protein. The gene is positioned in a vector for efficient expression in prokaryotic cells. The expressed protein can be used in tests for the detection of antibodies specific for the HCV C protein. See also AAR74048. (Updated on 25-MAR-2003 to correct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /label= Gly
/note= "amino acid in this position is designated X in
the specification, but codon usage shows that the only
possible amino acid at this pos. is Gly"
                                        Vector for expression of a synthetically produced protein coding DNA - pref. encodes the hepatitis C virus nucleo-capsid protein which can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MSTIPKPORKTKRNINRRPQDVKFPGGGGIVGGVYLLPRRGPRLGVRAIRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KV1DTLTCGFADLMGY1PVVGAPLGGVAAALAHGVRA1EDG1NYATGNLPGCSFS1FLLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hepatitis C virus, subtype, polymerase chain reaction, amplification, PCR, primer, probe, antibody, infection.
                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hepatitis C virus types 9a(7a) isolates FR1 amino acids 1-317
                                                                                                                                                                                                                                                                                                                                                                        Length 196;
                                                                                                                                                                                                                                                                                                                                                                                                                 9; Indels
                                                                                                                                                                                                                                                                                                                                                                      Query Match
93.5%; Score 977; DB 2;
Best Local Similarity 92.1%; Pred. No. 6.8e-84;
Matches 176; Conservative 6; Mismatches 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'label= Phe, Ser, Tyr, Cys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /label= Ser, Pro, Thr, Ala
                                                                   pref. encodes the hepatitis C virus nucl
used in the detection of HCV antibodies.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                              Disclosure; Page 35; 44pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ź
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'label= Ile, Met
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAR96546 standard; peptide; 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          95WO-EP004155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              $4EP-00870166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LLSCLTVPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Misc-difference 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Misc-difference 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hepatitis C virus
  N-PSDB; AAQ92070.
                                                                                                                                                                                                                                                                                                                           Sequence 196 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO9613590-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23-OCT-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21-OCT-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10-MAR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 09-MAY-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAR96546;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
```

셤

ઠે

ò

셤 ઠે 원 120 180

120

9 9

Gaps

.; 0

```
The sequence is that of NANB hepatitis virus HC-OM gene polypeptide P-733 -1. It may may be used in a system for detecting NANB hepatitis. This method is highly specific and sensitive, and can detect NANB hepatitis virus which could not be detected by conventional methods
   61 RRQPIPKARRPEGRTWAQPGYPWPLYGNEGCGWGGWLLSPRGSRPSWGPTDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 RRQPIPKVRRPEGRIWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPIDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KVIDTLICGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Antigen related to non-A and non-B hepatitis virus - comprises non-translation region comprising 340 - 341 mols. of nucleotides, non-translation region comprising 1885 - 2551 mols. of nucleotides including
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                   KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MSTIPKPORKTKRNTNRRPODVKFPGGGOIVGGVYLLPRRGPRLGVRATRKTSERSOPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG
                                                                                                                                                                                                                                                                                                                                                                Non-A, non-B; virus; polymerase chain reaction; detection; sensitive;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MSTLPKPORKTKRNTNRRPTDVKFPGGGOIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 977; DB 2; Length 733;
Pred. No. 3e-83;
6; Mismatches 9; Indels
                                                                                                                                                                                                                                                                                                                              NANB hepatitis virus HC-OM gene polypeptide P-733-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 14; Page 32-35; 73pp; Japanese.
                                                                                                                                                                                                                            AAR38278 standard; protein; 733 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            90JP-00153401.
90JP-00304405.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             93.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          91JP-00196175
                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 92.1
Matches 176; Conservative
                                                                                                       LLSCLTTPASA 191
                                                                                                                                        181 LLSCLTVPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                    Non-A.
non-B hepatitis virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     region 1,149 and, etc.
                                                                                                                                                                                                                                                                                                                                                                                  specific, HCV, NANBH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1993-199637/25.
N-PSDB; AAQ43888.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (NAKA/) NAKAMURA T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 733 AA;
                                                                                                                                                                                                                                                                                              21-OCT-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JP05091884-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10-APR-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12-JUN-1990;
08-NOV-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16-APR-1993.
                                                                    121
                                                                                                                                                                                                                                                              AAR38278;
                                   121
                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                        RESULT 13
AAR38278
                                                                                                                                                                                                                            ò
                                                                    셤
                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              요: 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Deoxyribonucleic acid sequence encoding non-A, non-B hepatitis virus -obtd. Hutch C59 subgroup encoding polypeptide(s), useful as vaccines, and immuno reactive ABS for diagnosis of virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    One Hutch strain (HCV-H) of NANBV, designated the Hutch c59 isolate (HCV-HC59) was propagated through passage in animals and the entire viral genome was cloned and sequenced (see AAQ22871). The sequence represented here comprises two amino acids, indicated in the features, which differ from the sequence of AAR2154. The proteins and peptides (see features) and antibodies against them are useful for the prepn. of vaccines and incoluums against NANBV and in immunological assays for detection of viral infection. (Updated on 25-MAR-2003 to correct PR field.) (Updated on 27-AUG-2003 to correct
                                                                                                                                                                                                                          "or Asn according to Seq No 46 (AAR22154), see CC"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MSTIPKPQRKTKRNTNRRPQDVKFPGGGIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60
                                                                                                                                                                                                                                                                                                                                                                                                                  /note= "or Asn according to Seq No 1 (AAR22154), see CC"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 977; DB 2; Length 326;
Pred. No. 1.2e-83;
6; Mismatches 9; Indels
                   . .326
|abel= NANBV_structural_proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Prince AM;
                                                                                                                                                                                                                                                                                                                                             121. 176
/label= pref._envelope_antigen
                                                                                  1. .74
/label= pref._capsid_antigen
                                                                                                                  .20
label= pref._capsid_antigen
                                                                                                                                                                                                                                      21. .40
/label= pref._capsid_antigen
69. .120
                                                                                                                                                                                                                                                                                          /label= pref._capsid_antigen
121. .326
/label= envelope_protein
                                                                                                                                                    . 40 -
label= pref._capsid_antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Page 131-133; 225pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nasofe MS,
Location/Qualifiers
                                                1. .120
/label= capsid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         90US-00573643.
90US-00616369.
91US-00748564.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 92.1%;
Matches 176; Conservative 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NEW YORK BLOO DCENT. PHARMA.
                                                                                                                                                                                                        label= Ile
                                                                                                                                                                                                                                                                                                                                                                                                /label= Asp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zebedee S, Inchauspe G,
                                                                                                                                                                                                                              note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1992-096821/12.
N-PSDB; AAQ22838.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 326 AA;
                                                                                                                                                                                      Misc-difference
                                                                                                                                                                                                                                                                                                                                                                               Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-AUG-1990;
21-NOV-1990;
21-AUG-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-AUG-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO9203458-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     05-MAR-1992
                                                                                  Peptide
                                                                                                                      Peptide
                                                                                                                                                      Peptide
                                                                                                                                                                                                                                        Peptide
                                                                                                                                                                                                                                                                          Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (NYBL-)
                                                                                                                                                                                                                                                                                                                                              Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PHAR-)
 Key
Region
                                                  Region
                                                                                                                                                                                                                                                                                                            Region
```

6 B 6

```
a virus is considered to be the same of equiv. to HCV if it exhibits a global homology of more than 70 percent with the HCV HC- J1/CDC/CHI composite sequence. The peptide fragmets of this DNA sequence indicated in the features table can immunologically mimic proteins encoded by HCV. Additional amino acids or chemical gps. may be added to either end of the peptides for the purpose of creating a linker arm for attachment to a carrier. The peptides can be used for the detection of antibodies specific for HCV. They may be used in the form of kits, opt. with respention or streptavidin. The peptides may also be used as immunogens for raising antibodies. (Updated on 25-WAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic antigens for the detection of hepatitis C virus antibodies - comprise portions of the HCV peptide sequence, for use in screening blood
                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MSTIPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 RRQPIPKVRRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSRNLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KVIDTLTCGPADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RRQP1 PKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG
                                                                                                                                                                                                                                                                                                                                                                                                                            1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
e.g. ELISA assays, and for detection of HCV antigens or as
                                                                                       RNA viruses frequently exhibit a high rate of spontaneous mutation,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Composite hepatitis C virus; HC-J1/CDC/CHI; HCV; non-A non-B; synthetic antigens; blood screening.
                                                                                                                                                                                                                                                                                                                                                     Score 977; DB 2; Length 2894;
Pred. No. 1.4e-82;
6; Mismatches 9; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Van Heuverswyn H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Composite hepatitis C virus (HC-J1/CDC/CHI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAR70230 standard; protein; 2894 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Maertens G,
                                                      Disclosure; Fig 1; 32pp; English
                                                                                                                                                                                                                                                                                                                                                       93.5%;
92.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    94EP-00108611.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     90EP-00124241.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 92.1
Matches 176; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LLSCLTVPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (INNO-) INNOGENETICS NV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ď,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1995-116946/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pollet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hepatitis C virus.
                                                                                                                                                                                                                                                                                                                      Sequence 2894 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14-DEC-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14-DEC-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25-MAR-2003
07-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EP644202-A1
                       immunogena.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Deleys RJ,
 useful in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAR70230;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAR70230
   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New synthetic peptides for detecting antibodies to hepatitis C virus -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Van Heuverswyn
                                                                                                                                                                                                                                                Hepatitis C virus, peptides, antibodies, ELISA.
                                                                                         AAR24440 standard; protein; 2894 AA.
                                                                                                                                                                                                              Composite HCV HC-J1/CDC/CHI protein.
                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Maertens
                                                                                                                                                                                                                                                                                                                                                                       7. 26

7. 126

13. 13.

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126

7. 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1718. .1737
/label= 12
1724. .1743
1730. .1749
/label= 14
2263. .2282
/label= 15
/label= 15
/label= 15
/label= 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      90EP-00124241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       90EP-00124241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1694. .1713
/label= 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2287. .2306
/label= 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1712. .1731
/label= 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1706. .1725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2299. .2318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2311. .2330
/label= 19
                                                                                                                                                                                                                                                                                                                                          1. .20
/label= 1
                                                                                                                                                                               (first entry)
   181 LLSCLTVPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (INNO-) INNOGENETICS NV.
                                                                                                                                                             (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pollet D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1992-201383/25.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14-DEC-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14-DEC-1990;
                                                                                                                                                             25-MAR-2003
02-DEC-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EP489968-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17-JUN-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ω,
                                                                                                                                                                                                                                                                                     Synthetic
                                                                                                                          AAR24440;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Peptide
                                                                                                                                                                                                                                                                                                                                      Peptide
                                                                                                                                                                                                                                                                                                                                                                         Peptide
                                                                                                                                                                                                                                                                                                                                                                                                          Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                             Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Peptide
                                                                                         a
```

ö

Gaps

ö

9 9

```
AAR70230 is the composite hepatitis C virus (HC-J1/CDC/CHI) protein from which the synthetic HCV antigens described in AAR70210-R70229 were derived. These synthetic antigens can be used to screen blood, or blood products for the presence HCV, they can also be used in various specific assays for the detection of HCV antibodies, and antigens, or as immunogens. (Updated on 25-MAR-2003 to correct PV field.)
                                      Disclosure; Fig 1; Slpp; English.
and blood products.
                                                                                                                                                                                                                                             Sequence 2894 AA;
```

ö 1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60 Gaps ö Query Match 93.5%; Score 977; DB 2; Length 2894; Best Local Similarity 92.1%; Pred. No. 1.4e-82; Matches 176; Conservative 6; Mismatches 9; Indels (

셤

셤

ઠે

셤 ò

181 LLSCLTTPASA 191

ò

181 LLSCLTVPASA 191 요

Search completed: July 15, 2005, 09:55:32 Job time: 73 secs

This Page Blank (uspto)

```
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: amino acid STRANDEDNESS: un)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     USA
                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 1
US-08-290-665A-206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-290-665A-206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
App
App
App
App
                                                                                                                 July 15, 2005, 09:50:42; Search time 22 Seconds (without alignments) 648.090 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                 .........CSFSIFLLALLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                513545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5.1.6
Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-635-886C-228
US-08-29-655A-191
US-08-29-665A-191
US-08-290-665A-192
US-08-290-665A-193
US-08-290-665A-193
US-08-290-665A-172
PCT-US95-10398-193
US-08-290-665A-172
PCT-US95-10398-193
US-08-290-665A-172
PCT-US95-10398-193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-635-8867-217
US-08-974-690C-217
US-08-290-665A-195
PCT-US95-1038-196
PCT-US95-10388-196
US-08-290-665A-196
US-08-390-665A-196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .08-635-886C-181
                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-466-975A-23
US-08-391-671A-23
                                                                                                                                                                                                                                                                                                                          513545 segs, 74649064 residues
               version :
- 2005 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                   protein search, using sw model
                                                                                                                                                                                                                                                                   BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                 MSTLPKPQRKTKRNTNRRPT
               GenCore
Copyright (c) 1993
                                                                                                                                                                                       US-09-084-691B-206
1045
                                                                                                                                                                                                                                                                                                                                                                                                  length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 5 6
                                                                                                                                                                                                                                                                                                                                                                                                  seq
sed
                                                                                                                                                                                             Title:
Perfect score:
                                                                                                                                                                                                                                                                     Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
10045
                                                                                     •
                                                                                   OM protein
                                                                                                                                                                                                                                                                                                                                                                                                  Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Database :
                                                                                                                                                                                                                                     Seguence:
                                                                                                                       Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Result
No.
```

```
Sequence 23, Appl
Sequence 23, Appl
Sequence 23, Appl
Sequence 156, App
Sequence 157, App
Sequence 159, App
Sequence 159, App
Sequence 159, App
Sequence 156, App
                                                                                                                                                                        Sequence 160,
Sequence 179,
Sequence 180,
Sequence 179,
                                                                                                                                                                                                                           Sequence 180,
                                                                                                                                              Sequence 1
Sequence 1
Sequence 1
US-08-467-902A-23
US-09-275-265-23
US-09-291-611-23
US-08-290-665A-156
US-08-290-665A-159
US-08-290-665A-159
US-08-290-665A-160
US-08-30-665A-160
US-08-30-665A-160
US-08-30-10398-156
PCT-US95-10398-156
PCT-US95-10398-159
PCT-US95-10398-159
PCT-US95-10398-160
US-08-635-886C-179
US-08-635-886C-179
US-08-635-886C-179
US-08-635-886C-179
US-08-635-886C-179
US-08-635-886C-179
```

ALIGNMENTS

```
NUCLEOTIDE AND DEDUCED
AMINO ACID SEQUENCES OF THE ENVELOPE 1 AND
CORE GENES OF 1SOLATES OF HEPATITIS C VIRUS
AND THE USE OF REAGENTS DERIVED FROM THESE
SAUBNICES IN DIAGNOSTIC METHODS AND VACCINES
263
                                                                         APPLICANT: BURGH, J., MILLER, R.H. AND APPLICANT: PURCELL, R.H.
TITLE OF INVENTION: NUCLEOTIDE AND DEDUCC TITLE OF INVENTION: CORE GENES OF ISOLATITLE OF INVENTION: AND THE USE OF REAGES TITLE OF INVENTION: SEQUENCES IN DIAGNOS NUMBER OF SEQUENCES. 263
CORRESPONDENCE ADDRESS: 263
STREET: 345 PARK AVENUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: USA

ZIP: 110154

COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPEY DISK
COMPUTER: 1BM FC COMPATIBLE
COMPUTER: 1BM FC COMPATIBLE
OPERATING SYSTEM: FC-DOS/MS-DOS
SOFTWARE: WORDERFERFOT 5.1

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/290,665A
FILING DATE: 15-AUG-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: RIGHARD W. BORK
REGISTRATION NUMBER: 36,459
REFERENCE/DOCKET NUMBER: 2026-4116
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
; Sequence 206, Application US/08290665A; Patent No. 5882852; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                            ADDRESSEE: MORGAN & FINNEGAN STREET: 345 PARK AVENUE CITY: NEW YORK STATE: NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: (212) 751-6849
TELEX: 421792
INFORMATION FOR SEQ ID NO: 206: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: (212) 758-4800
TELEFAX: (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 191 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: homosapiens
INDIVIDUAL ISOLATE: HK2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              unknown
```

Length 191;

Score 1045; DB 2; Pred. No. 9.9e-97;

```
Best Local Similarity 100.0
Matches 191; Conservative
                                                                                                                                      61
                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                           ઠે
                                                                                            셤
                                                                                                                                    ò
                                                                                                                                                                     셤
                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ద
                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
   ö
                                                                                                                    61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                          61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                           121 KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                 9
                                         1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                            1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                              N.H.

NUCLEOTIDE AND DEDUCED
AMINO ACID SEQUENCES OF THE ENVELOPE 1 AND
CORE GENES OF ISOLATES OF HEPATITIS C VIRUS
AND THE USE OF REAGENTS DERIVED FROM THESE
SEQUENCES IN DIAGNOSTIC METHODS AND VACCINES
     ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 191;
   Indels
     ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 5;
   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 1045;
                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: BUXCH, J., MILLER, R.H. AND
APPLICANT: BUXCELL, R.H.
TITLE OF INVENTION: MUCLEOTIDE AND DEDUC
TITLE OF INVENTION: CORE GENES OF ISOLAT
TITLE OF INVENTION: CORE GENES OF ISOLAT
TITLE OF INVENTION: AND THE USE OF REAGE
TITLE OF INVENTION: SEQUENCES IN DIAGNOS
NUMBER OF SEQUENCES: 263
CORRESPONDENCE ADDRESS:
ADDRESSEE: ADDRESS:
ADDRESSEE: ADDRESS:
CORRESPONDENCE ANDRESSEE
CITY: NEW YORK
STATE: NEW YORK
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: USAA
ZIP: 10154
COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPEY DISK
COMPUTER: 1BM FC COMPATIBLE
COMPUTER: 1BM FC COMPATIBLE
OPERATING SYSTEM: FC-DOS/MS-DOS
SOFTWARE: WORDERFERT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/10398
FILING DATE: 15-AUG-1995
CLASSIFICATION DATA:
APPLICATION NUMBER: 08/086,428
FILING APPLICATION DATA:
APPLICATION NUMBER: 08/29/665
FILING DATE: 19 JUNE 1993
RROR APPLICATION DATA:
APPLICATION NUMBER: 08/29/665
FILING DATE: 15 AUGUST 1994
ATTORNEY/AGENT INPORMATION:
NUMBER: RICHARD W. BORK
                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 206, Application PC/TUS9510398 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REGISTRATION NUMBER: 36,459
REFERENCE/DOCKET NUMBER: 202
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEFAX: (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: (212) 751-6849
TELEFAX: 421792
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 191 amino acids
TYPE: amino acid
STRANDEDNESS: unknown
TOPOLOGY: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: homosapiens
INDIVIDUAL ISOLATE: HK2
     191; Conservative
                                                                                                                                                                                                                                                                      LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                          181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                       PCT-US95-10398-206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PCT-US95-10398-206
                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
 Matches
                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                      ò
                                                                            셤
                                                                                                                  ઠ
                                                                                                                                                    d
                                                                                                                                                                                         ò
```

```
ö
                                                                                                                                                                                                            61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                          Sequence 228, Application US/08635886C
; Sequence 228, Application US/08635886C
; Patent No. 6555114
; GENERAL INPORMATION:
; APPLICANT: LEROUX-ROBLS, Geert
; APPLICANT: DELEYS, Robert
; APPLICANT: MARRIENS, Geert
; TITLE OF INVENTION: UNMUNODOMINANT HUMAN T CELL EPITOPES OF HEPATITIS C
; TITLE OF INVENTION: UNBUSE: US/08/635,886C
; TITLE OF INVENTION: UNBUSE: 1996-04-25
; FILE REFERENCE: 2752-18
; FILE REFERENCE: 1996-04-25
; PRIOR APPLICATION NUMBER: EP 93402718.6
; PRIOR PLILING DATE: 1994-10-28
; PRIOR FILING DATE: 1994-10-28
; PRIOR FILING DATE: 1993-11-04
; NUMBER OF SEQ ID NOS: 286
; SOFTWARE: Patentin version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MSTLPKPORKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSOPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RROPI PKAROPOGRHWAOPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG
                                                                                                                       1 MSTLPKPORKTKRNTNRRPTDVKFPGGGOIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG
                                                                            1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MSTLPKPORKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                              Gaps
                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 319;
                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5; DB 4;
1.9e-96;
                              ö
       Pred. No. 9.9e-97;
100.0%; Pred. wc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 1045;
Pred. No. 1.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-974-690C-228
Sequence 228, Application US/08974690C
Patent No. 661333
GENERAL INFORMATION:
APPLICANT: LEROUX-ROBLS, Geert
APPLICANT: DELEYS, Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: hepatitis C virus US-08-635-886C-228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 100.
Best Local Similarity 100.
Matches 191; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                 181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LLSCLTTPASA 191
```

```
61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIBDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 KVIDTLTCGFADLMGYIPIVGAPVGGVARALAHGVRAVEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                         1 MSTNPKPQRKTKRNTNRRPMDVKFPGGGIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                1 MSTLPKPORKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUCLEOTIDE AND DEDUCED
AMINO ACID SEQUENCES OF THE ENVELOPE 1 AND
CORE GENES OF ISOLATES OF MEDATITIES C VIRUS
NUT THE USE OF REAGENTS DERIVED FROM THESE
SEQUENCES IN DIAGNOSTIC METHODS AND VACCINES
                                                                                                                                                                                                                                                                                            Score 996; DB 2; Length 191;
Pred. No. 7.9e-92;
                                                                                                                                                                                                                                                                                  95.3%; Score ... 94.8%; Pred. No. 7.9e-... 4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: BURH, J., MILLER, R.H. AND
TITLE OF INVENTION: NUCLEOTIDE AND DEDUCI
TITLE OF INVENTION: AMINO ACID SEQUENCES;
TITLE OF INVENTION: AMINO ACID SEQUENCES;
TITLE OF INVENTION: AND THE USE OF ISOLATI;
TITLE OF INVENTION: SEQUENCES;
TITLE OF INVENTION: SEQUENCES;
TITLE OF SEQUENCES: 263
CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: PCT/US95/10398
FILING DATE: 15-AUG-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER: 2026-4116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
CMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 08/086,428
FILING DATE: 29 JUNE 1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/290/665
                                      TELEX: 421792
INFORMATION FOR SEQ ID NO: 191:
SEQUENCE CHARACTERISTICS:
LENGTH: 191 amino acids
TYPE: amino acids
        (212) 758-4800
(212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: WORDPERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 15 AUGUST 1
ATTORNEY/AGENT INFORMATION:
NAME: RICHARD W. BORK
REGISTRATION NUMBER: 36,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET: 345 PARK AVENUE
CITY: NEW YORK
STATE: NEW YORK
COUNTRY: USA
                                                                                                                                                                                                               ORGANISM: homosapiens
INDIVIDUAL ISOLATE: Z4
                                                                                                                                                                                                                                                                                                                  Best Local Similarity 94.8
Matches 181; Conservative
                                                                                                                                                     SS: unknown unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LLSCLTVPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION:
PRIOR APPLICATION DATA:
                                                                                                                                TYPE: amino ac
STRANDEDNESS:
TOPOLOGY: unkn
ORIGINAL SOURCE:
          TELEPHONE:
                                                                                                                                                                                                                                                        US-08-290-665A-191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PCT-US95-10398-191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10154
                                TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                        ō
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60
APPLICANT: MAERTENS, Geert
TITLE OF INVENTION: IMMUNODMINANT HUMAN T CELL EPITOPES OF HEPATITIS C
TITLE OF INVENTION: UNIUS
FILE REFERENCE: 2551-94
CURRENT PRILING DATE: 1997-11-19
PRIOR APPLICATION NUMBER: PCT/FEP94/03555
PRIOR APPLICATION NUMBER: PCT/FEP94/03555
PRIOR PAPLICATION NUMBER: EP 93402718.6
PRIOR PLING DATE: 1993-11-04
NUMBER OF SEQ ID NOS: 286
SOFTWARE: Patentin version 3.1
SEQ ID NO 228
LENGTH: 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R.H.
NUCLEOTIDE AND DEDUCED
ANINO ACID SEQUENCES OF THE ENVELOPE 1 AND
CORE GENES OF ISOLATES OF HEPATITIS C VIRUS
AND THE USE OF REAGENT'S DERIVED FROM THESE
SEQUENCES IN DIAGNOSTIC METHODS AND VACCINES
263
                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                Length 319;
                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                           Query Match 100.0%; Score 1045; DB 4; Best Local Similarity 100.0%; Pred. No. 1.9e-96; Matches 191; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MILLER, R.H. AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JMBER: US/08/290,665A
15-AUG-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2026-4116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-290-665A-191
; Sequence 191, Application US/08290665A
; Patent No. 5882852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MORGAN & FINNEGAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: RICHARD W. BORK
REFERENCE/DOCKET NUMBER: 202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MORGAN E FINN.
345 PARK AVENUE
LITY: NEW YORK
STATE: NEW YORK
COUNTRY: 170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FLOPPY DISK
                                                                                                                                                                                                                                                                                          ; TYPE: PRT
; ORGANISM: hepatitis C virus
US-08-974-690C-228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: MUCI
TITLE OF INVENTION: AMIN
TITLE OF INVENTION: CORE
TITLE OF INVENTION: AND
TITLE OF INVENTION: SEQUENCES: 263
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ZIP: 10154
COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANT: BUKH, J.,
APPLICANT: PURCELL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   名
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
```

```
61 RRQPIPKARQPGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 RRQPIPKARRSEGRSWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 KVIDTLTCGFADLMGYIPLVGAPVGGVARALAHGVRAVEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                     1 MSTNPKPQRKTKRNTNRRPMDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60
                                                                                                                                                                                                                                                                                                                                                          1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUCLECTIDE AND DEDUCED
AMINO ACID SEQUENCES OF THE ENVELOPE 1 AND
CORE GENES OF ISOLATES OF HEPATITIS C VIRUS
AND THE USE OF REAGENTS DERIVED FROM THESE
SEQUENCES IN DIAGNOSTIC METHODS AND VACCINES
                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                            94.0%; Score 982; DB 2; Length 191;
93.7%; Pred. No. 2e-90;
tive 5; Mismatches 7; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: BURH, J., MILLER, R.H. AND APPLICANT: BURH, J., MILLER, R.H. AND TITLE OF INVENTION: WUCLEOTIDE AND DEDUCTIVE OF INVENTION: WUCLEOTIDE AND DEDUCTIVE OF INVENTION: AMINO ACID SEQUENCES; TITLE OF INVENTION: SEQUENCES IN DIAGNOS; NUMBER OF SEQUENCES: 263

NUMBER OF SEQUENCES: 263

CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WORDPERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/290,665A
FILING DATE: 15-AUG-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: RIGHARD W. BORK
REGISTRATION NUMBER: 36,459
REFERENCE/DOCKET NUMBER: 2026-4116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 8
8.08-290-665A-193
7. Sequence 193, Application US/08290665A
Patent No. 5882852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEX: 421792
INFORMATION FOR SEQ ID NO: 193:
SEQUENCE CHARACTERISTICS:
LENGTH: 191 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E: FLOPPY DISK
IBM PC COMPATIBLE
INFORMATION FOR SEQ ID NO: 192: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE: (212) 758-4800
TELEFAX: (212) 751-6849
                                              LENGTH: 191 amino acids
TYPE: amino acid
STRANDEDNESS: unknown
TOPOLOGY: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     345 PARK AVENUE
                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 93.7
Matches 179; Conservative
                                                                                                                                                                  ORGANISM: homosapiens INDIVIDUAL ISOLATE: Z8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |||||| ||||
181 LLSCLTVPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZIP: 10154
COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: NEW YORK STATE: NEW YORK
                                                                                                                                           ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          USA
                                                                                                                                                                                                                US-08-290-665A-192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STATE:
                                                                                                                                                                                                                                                                                                                                                                                                      엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 RRQPIPKARQPEGRSWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 KVIDTLTCGFADLMGYIPIVGAPVGGVARALAHGVRAVEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MSTNPKPORKTKRNTNRRPMDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 192, Application US/08290665A
Patent No. 5882852
GENERAL INFORMATION
APPLICANT: BUCH, J., MILLER, R.H. AND
APPLICANT: PURCELL, R.H.
TITLE OF INVENTION: NUCLEOTIDE AND DEDUCED
TITLE OF INVENTION: AMINO ACID SEQUENCES OF THE ENVELOPE 1 AND
TITLE OF INVENTION: AND THE USE OF REAGENTS DERIVED FROM THESE
TITLE OF INVENTION: SEQUENCES IN DIAGNOSTIC METHODS AND VACCINES
NUMBER OF SEQUENCES: 263
CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN
                                                                                                                                                                                                                                                                                                                                                                                                           ,
0
                                                                                                                                                                                                                                                                                                                                                            Length 191;
                                                                                                                                                                                                                                                                                                                                                                                                        6; Indels
                                                                                                                                                                                                                                                                                                                                                       Score 996; DB 5;
Pred. No. 7.9e-92;
4; Mismatches 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: 1BM FC COMPATIBLE
COMPUTER: 1BM FC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WORDPREFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/290,665A
FILING DATE: 15-AUG-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: RIGHARD W. BORK
REGISTRATION NUMBER: 36,459
REFERENCE/DOCKET NUMBER: 3226-4116
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEFERX: (212) 751-6849
                      TELEPHONE: (212) 758-4800
TELERA: (212) 751-6849
TELER: 421792
INFORMATION FOR SEQ ID NO: 191:
SEQUENCE CHARACTER STICS:
LENGTH: 191 amino acids
TYPE: amino acid
STRANDEDNESS: unknown
TOPOLOGY: unknown
ORIGINAL SOURCE:
    TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 94.8%;
Matches 181; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET: 345 PARK AVENUE
CITY: NEW YORK
STATE: NEW YORK
                                                                                                                                                                                                                                                               ORGANISM: homosapiens INDIVIDUAL ISOLATE: Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181 LLSCLTVPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 7
US-08-290-665A-192
                                                                                                                                                                                                                                                                                                             PCT-US95-10398-191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
```

```
amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NEW YORK
NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           USA
                                                                                                            PCT-US95-10398-192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 10
PCT-US95-10398-193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STATE:
                                                                                                                                                                                                                                                   d
                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                          임
                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                         61 RRQPIPKARRSEGRSWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                         KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                       1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N.H.

NUCLEOTIDE AND DEDUCED
AMINO ACID SEQUENCES OF THE ENVELOPE 1 AND
CORE GENES OF INSOLATES OF HEPATITIS C VIRUS
AND THE USE OF REAGENTS DERIVED FROM THESE
SEQUENCES IN DIAGNOSTIC METHODS AND VACCINES
                                                                                                                                                               ö
                                                                                                                         94.0%; Score 982; DB 2; Length 191; 93.7%; Pred. No. 2e-90; tive 5; Mismatches 7; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET: 345 PARK AVENUE
CITY: NEW YORK
STATE: NEW YORK
COUNTRY: USA
ZIP: 10154
COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
COMPUTER: HORDERFECT 5.1
CUBRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/10398
FILING DATE: 15-AUG-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TT-US95-10398-192
Sequence 192, Application PC/TUS9510398
GENERAL INFORMATION:
APPLICANT: BUKH, J., MILLER, R.H. AND
APPLICANT: PURCELL, R.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REGISTRATION NUMBER: 36,459
REFERENCE/DOCKET NUMBER: 2026-4116
TELECOMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEPRAX: (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/086,428
FILING DATE: 29 JUNE 1993
PRIOR APPLICATION DATA: 08/290/665
APPLICATION NUMBER: 08/290/665
FILING DATE: 15 AUGUST 1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: WUCLEOTIDE AN TITLE OF INVENTION: AMINO ACID SE TITLE OF INVENTION: CORE GENES OF TITLE OF INVENTION: SEQUENCES IN NUMBER OF SEQUENCES: 263
CORRESPONDENCE ADDRESS: CORRESPEE: MORGAN & FINNEGAN STREET: 345 PARK AVENUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEX: 421792
INFORMATION FOR SEQ ID NO: 192:
SEQUENCE CHARACTERISTICS:
LENGTH: 191 amino acids
                                                    ORGANISM: homosapiens
INDIVIDUAL ISOLATE: Z1
                                                                                                                       Query Match
Best Local Similarity 93.7
Matches 179; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                    181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: RICHARD W. BORK
             ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION:
STRANDEDNESS:
TOPOLOGY: unk
                                                                                        US-08-290-665A-193
                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                       . 염
                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                             용
                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                      유
```

```
61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                 61 RRQPIPKARRSEGRSWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                           KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                       1 MSTLPKPORKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUCLEOTIDE AND DEDUCED
AMINO ACID SEQUENCES OF THE ENVELOPE 1 AND
CORE GENES OF ISOLATES OF HEPATITIS C VIRUS
AND THE USE OF REAGENTS DERIVED FROM THESE
SEQUENCES IN DIAGNOSTIC METHODS AND VACCINES
                                                                                                                                                                                                      ö
                                                                                                                                                        5; Length 191;
                                                                                                                                                                                                      IndelB
                                                                                                                                                                                                  7;
                                                                                                                                                        Score 982; DB 5;
Pred. No. 2e-90;
                                                                                                                                                                                                    5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 10154
COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPEY DISK
COMPUTER: 1BM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WORDPERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/10398
FILING DATE: 15-AUG-1995
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 193, Application PC/TUS9510398
GENERAL INFORMATION:
PAPLICANT: BUKH, J., MILLER, R.H. AND
APPLICANT: PURCELL, R.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/086,428
FILING DATE: 29 UNB 1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/290/665
FILING DATE: 15 AUGUST 1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: MORGAN & FINNEGAN STREET: 345 PARK AVENUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: RICHARD W. BORK
REGISTRATION NUMBER: 36,459
REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEX: 421792
INFORMATION FOR SEQ ID NO: 193:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                        94.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             : (212) 758-4800
(212) 751-6849
                                                                                                                                                      Query Match
Best Local Similarity 93.7
Matches 179; Conservative
                                                                     ORGANISM: homosapiens INDIVIDUAL ISOLATE: Z8
STRANDEDNESS: unknown
TOPOLOGY: unknown
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181 LLSCLTVPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: NUCTITLE OF INVENTION: AMITITLE OF INVENTION: CORTITLE OF INVENTION: SEQUENCES: 26 CORRESPONDENCE ADDRESS:
```

```
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 12
                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                             61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                      121 KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MSTNPKPQRKTKRNTNRRPMDVKFPGGGQIVGGVYLLPRRGPRLGVRAARKTSERSQPRG 60
                                                                                                                                                                                                                                                                                        1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60
                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R.H.
NUCLEOTIDE AND DEDUCED
NUCLEOPE 1 AND
CORE GENES OF ISOLATES OF THE ENVELOPE 1 AND
CORE GENES OF ISOLATES OF HEPATITIS C VIRUS
AND THE USE OF REAGENTS DERIVED FROM THESE
280IENCES IN DIAGNOSTIC METHODS AND VACCINES
263
                                                                                                                                                                                                                                               ..
0
                                                                                                                                                                                                 94.0%; Score 982; DB 5; Length 191; 93.7%; Pred. No. 2e-90;
                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                        7;
                                                                                                                                                                                                                                             5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:

MEDIUM TYPE: FLOPPY DISK
COMPUTER: PLOPPY DISK
COMPUTER: IBM FOC COMPATIBLE
OPERATING SYSTEM: PC-DOS/NS-DOS
SOFTWARE: WORDERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/290,665A
FILING DATE: 15-AUG-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: RIGHARD W: BORK
REGISTRATION NUMBER: 36,459
REGISTRATION NUMBER: 30,459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MILLER, R.H. AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 172, Application US/08290665A Patent No. 5882652 GENERAL INFORMATION:
APPLICANT: BUKH, J., MILLER, R.H. PAPPLICANT: PURCELL, R.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEX: 421792
INPORMATION FOR SEQ ID NO: 172:
SEQUENCE CHARACTERISTICS:
LENGTH: 191 amino acids
TYPE: amino acid
STRANDEDNES: unknown
TOPOLOGY: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FINNEGAN
LENGTH: 191 amino acids
TYPE: amino acid
STRANDEDNESS: unknown
TOPOLOGY: unknown
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: MORGAN & FINN
STREET: 345 PARK AVENUE
CITY: NEW YORK
STATE: NEW YORK
                                                                                                        ORGANISM: homosapiens
INDIVIDUAL ISOLATE: Z1
                                                                                                                                                                                                                      Best Local Similarity 93.7
Matches 179; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: MUCITILE OF INVENTION: AMINITILE OF INVENTION: CORE TITLE OF INVENTION: AND TITLE OF INVENTION: SEQUENCES: 263 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-290-665A-172
                                                                                                                                                        PCT-US95-10398-193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                          ò
```

```
61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                  121 KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                          မ
                                                                                                                                                                                                                                        1 MSTNPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                 61 RRQPIPKARQPEGRTWAQPGYPWPLYGNEGMGWAGWLLSPRGSRPNWGPTDPRRRSRNLG
                                                                                                                                                                                                        1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AMINO ACID SEQUENCES OF THE ENVELOPE 1 AND CORE GENES OF ISOLATES OF HEPATITIS C VIRUS AND THE USE OF REAGENTS DERIVED FROM THESE SEQUENCES IN DIAGNOSTIC METHODS AND VACCINES
                                                                                                                                                              ö
                                                                                                          Score 981; DB 2; Length 191;
Pred. No. 2.5e-90;
5; Mismatches 7; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: BUCH, J., MILLER, R.H. AND
APPLICANT: PURCELL, R.H.
TITLE OF INVENTION: UNCLEOTIDE AND DEDUC
TITLE OF INVENTION: CORE GENES OF ISOLAT
TITLE OF INVENTION: CORE GENES OF ISOLAT
TITLE OF INVENTION: SEQUENCES OF REAGE
TITLE OF INVENTION: SEQUENCES IN DIAGNOS
NUMBER OF SEQUENCES: 263
CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: PCT/US95/10398
FILING DATE: 15-AUG-1995
CLASSIFICATION DATA:
APPLICATION NUMBER: 08/086,428
FILING DATE: 29 JUNE 1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/290/665
FILING DATE: 15 AUGUST 1994
ATTORNEY/AGENT INPORMATION:
NAME: RICHARD W. BORK
REGISTATION NUMBER: 36,459
REFERENCE/DOCKET NUMBER: 2026-4116
TELECOMMUNICATION INPORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PCT-US95-10398-172; Sequence 172, Application PC/TUS9510398; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WORDPERFECT 5.1
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEX: 421792
INFORMATION FOR SEQ ID NO: 172:
                                                                                                          93.9%;
93.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEPHONE: (212) 758-4800
TELEFAX: (212) 751-6849
, INDIVIDUAL ISOLATE: HK3
US-08-290-665A-172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 191 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET: 345 PARK AVENUE
CITY: NEW YORK
STATE: NEW YORK
                                                                                                            Query Match
Best Local Similarity 93.7
Matches 179; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZIP: 10154
COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS:
```

```
61 RRQPIPKARQLEGRSWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPNDPRRRSRNLG 120
                                                                                                                                                                         1 MSTNPKPQRKTKRNTNRRPMDVKFPGGGOIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60
                                                                                                                                                                                                                                          61 RROPIPKAROPGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                        121 KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                               1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 14

PCT-US95-10398-197

Sequence 197, Application PC/TUS9510398

GENERAL INFORMATION:
APPLICANT: BUKH, J., MILLER, R.H. AND
APPLICANT: PUNCELL, R.H.
TITLE OF INVENTION: NUCLEOTIDE AND DEDUCED
TITLE OF INVENTION: AND THE USE OF THE ENVELOPE 1 AND
TITLE OF INVENTION: AND THE USE OF REAGENTS OF HEPATITIS C VIRUS
TITLE OF INVENTION: SEQUENCES OF HEPATITIS C VIRUS
TITLE OF INVENTION: SEQUENCES IN DIAGNOSTIC METHODS AND VACCINES
NUMBER OF SEQUENCES: 253

CORRESPONDENCE ADDRESS:
                                                                                              8; Indels
                                               93.7%; Score 980; DB 2;
93.7%; Pred. No. 3.1e-90;
tive 4; Mismatches 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WORDERRECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/10398
FILING DATE: 15-AUG-1995
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/086,428
FILING DATE: 29 JUNE 1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/290/665
FILING DATE: 15 AUGUST 1994
ATTONNEY, AGENT INFORMATION:
NAME: RICHARD W. BORK
REGISTRATION NUMBER: 36,459
REFRERENCE/DOCKET NUMBER: 36,459
REFREENCE/DOCKET NUMBER: 36,459
REFREENCE/DOCKET NUMBER: 36,459
REFREENCE/DOCKET NUMBER: 36,459
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE: MORGAN & FINNEGAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEX: 421792
INFORMATION FOR SEQ ID NO: 197:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: NEW YORK
STATE: NEW YORK
COUNTRY: US"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 191 amino acids
TYPE: amino acid
                                               Query Match 93.8'
Best Local Similarity 93.7'
Matches 179; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                    181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181 LLSCLTVPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: homosapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRANDEDNESS:
  US-08-290-665A-197
                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                        셤
                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                     1 MSTLPKPORKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                  KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                 61 RRQPIPKARQPEGRTWAQPGYPWPLYGNEGMGWAGWLLSPRGSRPNWGPTDPRRRSRNLG 120
                                                                                                                                                                                                                                                                  1 MSTNPKPQRKTKRNTNRRPQDVKFPGGGIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60
                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 197, Application US/08290665A
Patent No. 5882852
GENERAL INFORMATION:
APPLICANT: BURM, J., MILLER, R.H. AND
APPLICANT: PURCELL, R.H.
TITLE OF INVENTION: NUCLECTIDE AND DEDUCED
TITLE OF INVENTION: CORE GENES OF ISOLATES OF HEPATITIS C VIRUS
TITLE OF INVENTION: AND THE USE OF REAGENTS DERIVED FROM THESE
TITLE OF INVENTION: AND THE USE OF REAGENTS DERIVED SAND VACCINES
NUMBER OF SEQUENCES: 263
                                                                                                                                                                                          ö
                                                                                                                                           93.9%; Score 981; DB 5; Length 191; 93.7%; Pred. No. 2.5e-90;
                                                                                                                                                                                          7; Indels
                                                                                                                                                                                        5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPEY DISK
COMPUTER: IBM FC COMPATIBLE
OPERATING SYSTEM: PC-DOS/NS-DOS
SOFTWARE: WORDERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/290,665A
FILING DATE: 15-AUG-1994
CLASSIFICATION: 435
ATTORNASY/AGENT INFORMATION:
NAME: RICHARD W: BORK
REGISTRATION NUMBER: 36,459
REGISTRATION NUMBER: 36,459
REGISTRATION NUMBER: 2026-4116
TELEPHONE: (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEX: 421792
INFORMATION FOR ESQ. DI DOO: 197:
SEQUENCE CHARCTERISTICS:
LENGTH: 191 amino acide
STYPE: amino acide
STRANDEDNESS: unknown
TOPOLOGY: unknown
ORIGINAL SOURCE:
ORGANISM: homosanism:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: MORGAN & FINNEGAN
                      ORIGINAL SOURCE:
ORGANISM: homosapiens
INDIVIDUAL ISOLATE: HK3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET: 345 PARK AVENUE
CITY: NEW YORK
STATE: NEW YORK
COUNTRY: USA
                                                                                                                                                               Best Local Similarity 93.79
Matches 179; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
unknown
                                                                                            PCT-US95-10398-172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-290-665A-197
  TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
```

```
sequence 217, Application US/08635886C
; Sequence 217, Application US/08635886C
; Patent No. 6555114
; GENERAL INFORMATION:
; APPLICANT: LERENOMY-ROELS, Geert
; APPLICANT: DELENOMY-ROELS, Geert
; APPLICANT: MAERTENS, Geert
; TITLE OF INVENTION: IMMUNDOMINANT HUMAN T CELL EPITOPES OF HEPATITIS C
; TITLE OF INVENTION: VIRUS
; TITLE OF INVENTION: VIRUS
; FILE REFERENCE: 2752-18
; CURRENT APPLICATION NUMBER: US/08/635,886C
; CURRENT FILING DATE: 1994-10-28
; PRIOR APPLICATION NUMBER: EP 93402718.6
; PRIOR FILING DATE: 1993-11-04
; NUMBER OF SEQ ID NOS: 286
; SOFTWARE: Patentin version 3.1
; ENGTH: 319
; TYPE: PRI
                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRKSRNLG 120
                                                                                                                                                                                                                                                                                                    121 KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                             61 RRQPIPKARQLEGRSWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPNDPRRKSRNLG 120
                                                                                                                                                                                                                                                               61 RRQPIPKARQLEGRSWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPNDPRRKSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RROPIPKAROPOGRHWAOPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                        1 MSTNPKPQRKTKRNTNRRPMDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MSTNPKPQRKTKRNTNRRPMDVKFPGGGIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                               1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Gaps
                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 980; DB 4; Length 319;
Pred. No. 5.9e-90;
4; Mismatches 8; Indels
                                                                Length 191;
                                                                                                         8; Indels
                                                              Query Match 93.8%; Score 980; DB 5; Best Local Similarity 93.7%; Pred. No. 3.1e-90; Matches 179; Conservative 4; Mismatches 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Search completed: July 15, 2005, 09:59:02
Job time : 23 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 93.7%;
Matches 179; Conservative
        DK13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; ORGANISM: hepatitis C virus US-08-635-886C-217
                                                                                                                                                                                                                                                                                                                                                                                     181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                          181 LLSCLTVPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LLSCLTVPASA 191
; INDIVIDUAL ISOLATE: PCT-US95-10398-197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 15
US-08-635-886C-217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                               임
                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                셤
                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
```

Sequence 56, P Sequence 58, P Sequence 39, P Sequence 180,

Sequence 4, Appli Sequence 1, Appli Sequence 20, Appli Sequence 3, Appli Sequence 3, Appli Sequence 3, Appli Sequence 3, Appli Sequence 14, Appli Sequence 14, Appli Sequence 1, Appli Sequence 2, Appli Sequence 20, Appli

Sequence 1, Appli Sequence 4, Appli Sequence 2, Appli Sequence 2, Appli Sequence 3, Appli Sequence 3, Appli Sequence 3, Appli Sequence 2, Appli Sequence 2, Appli

9 9

Gaps

. 0

Result

Sequence:

Run on:

Searched:

Database

```
Sequence 228, Application US/10651165
; Publication No. US20040047877A1
; GREMEAL INFORMATION:
; APPLICANT: LERONY-ROELS, Geert
; APPLICANT: BELEYS, Robert
; APPLICANT: BELEYS, Geert
; TITLE OF INVENTION: IMMUNDCOMINANT HUMAN T CELL EPITOPES OF HEPATITIS C
; TITLE OF INVENTION: UMUNDCOMINANT HUMAN T CELL EPITOPES OF HEPATITIS C
; TITLE OF INVENTION: VALUS
; FILE REFERENCE: 2551-94
; CURRENT APPLICATION NUMBER: US/08/974,690C
; PRIOR PILING DATE: 2003-09-02
; PRIOR FILING DATE: 1999-110-28
; PRIOR FILING DATE: 1999-110-28
; PRIOR FILING DATE: 1993-11-04
; NUMBER OF SEQ ID NOS: 286
; SOFTWARE: PETENTIN VETEION 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; Score 1045; DB 15; Length 319; Pred. No. 1.5e-83; 0; Mismatches 0; Indels 0;
5 US-10-651-165-180

5 US-10-912-965-56

7 US-10-912-965-58

US-09-925-572-9

US-09-925-572-9

US-09-925-572-9

US-09-929-955-1

US-09-929-955-1

US-09-747-419-20

US-09-747-419-20

US-09-747-419-20

US-09-747-419-20

US-09-747-419-20

US-09-747-419-20

US-09-747-419-20

US-10-189-139-13

5 US-10-189-159-13

5 US-10-189-159-13

6 US-10-189-159-13

US-09-238-076-20

US-09-238-076-20

US-09-238-076-20

US-09-238-076-20

US-09-238-076-20

US-09-238-076-20

US-09-217-563-20

US-09-217-563-20

US-09-217-563-20

US-09-217-563-20

US-09-217-563-20

US-09-217-563-20

US-09-218-076-20

US-10-651-165-189

US-10-651-165-189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-916-359-2
US-10-445-724-2
US-09-194-949-3
US-10-664-391-3
US-10-770-117-2
US-10-651-165-187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 n
Similarity 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; ORGANISM: hepatitis C virus US-10-651-165-228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 100.
Best Local Similarity 100.
Matches 191; Conservative
     SEQ ID NO 228
     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 229, App
Sequence 181, App
Sequence 23, Appl
Sequence 23, Appl
Sequence 23, Appl
Sequence 54, Appl
Sequence 56, Appl
Sequence 56, Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 228, App
Sequence 217, App
Sequence 42, Appl
                                                                                                                   July 15, 2005, 09:58:44; Search time 164 Seconds (without alignments) 450.590 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                            1 MSTLPKPQRKTKRNTNRRPT.......CSFSIFLLALLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Published Applications AA:*

1: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*
2: /cgn2_6/ptodata/1/pubpaa/PCT_NEW PUB.pep:*
4: /cgn2_6/ptodata/1/pubpaa/US06_NEW PUB.pep:*
4: /cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*
5: /cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*
6: /cgn2_6/ptodata/1/pubpaa/US08_NEW PUB.pep:*
7/cgn2_6/ptodata/1/pubpaa/US08_NEW PUB.pep:*
9: /cgn2_6/ptodata/1/pubpaa/US08_NEW PUB.pep:*
10: /cgn2_6/ptodata/1/pubpaa/US08_NEW PUB.pep:*
11: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
11: /cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep:*
12: /cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep:*
13: /cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep:*
14: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
15: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
16: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
17: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
18: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
19: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
19: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
21: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
22: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
                  GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compuger Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S US-10-651-165-228
S US-10-651-165-217
US-09-851-138-42
S US-10-651-165-229
S US-10-651-165-181
US-09-941-611-23
US-10-044-995-23
T US-10-044-955-23
S US-10-922-871-23
S US-10-912-965-67
S US-10-912-965-67
S US-10-912-96
                                                                                                                                                                                                                                                                                                                                              Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                 1729182 seqs, 386893608 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                       Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                      - protein search, using sw model
                                                                                                                                                                                                                                                               BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                          US-09-084-691B-206
1045
                                                                                                                                                                                                                                                                                                                                                                                      seq length: 0
seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query
Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              319
3119
3119
2289
244
2449
550
560
560
560
560
                                                                                                                                                                                                              Perfect score:
                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1045
980
977
977
977
977
976
976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score
                                                                                      OM protein
                                                                                                                                                                                                                                                                                                                                                                                    Minimum DB
Maximum DB
```

ALIGNMENTS

ò 셤

ò 셤 ò

```
KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: LEROUX-ROELS, Geert
APPLICANT: DELEYS, Robert
APPLICANT: DELEYS, Robert
APPLICANT: DELEYS, Robert
TITLE OF INVENTION: UNMUNODMINANT HUMAN T CELL EPITOPES OF HEPATITIS C
TITLE OF INVENTION: VIRUS
TITLE OF INVENTION: VIRUS
TITLE OF INVENTION: VIRUS
CURRENT APPLICATION NUMBER: US/10/651,165
CURRENT FILING DATE: 2003-09-02
PRIOR APPLICATION NUMBER: US/08/974,690C
PRIOR APPLICATION NUMBER: PGT/EP94/03555
PRIOR FILING DATE: 1994-10-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MSTLPKPQRKTKRNTNRRPMDVKFPGGGIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .
0
CORRESPONDENCE ADDRESS:
ADDRESSE: ARNOLD, WHITE & DURKEE
STRET: P.O. BOX 4433
CITY: HOUSTON
STATE: TEXAS
COUNTRY: USA
ZITY: 77210-4433
COMPUTRY: USA
ZIP: 77210-4433
COMPUTRY: USA
COMPUTR: EPOPOW disk
COMPUTR: EPOPOW disk
COMPUTR: Flopy disk
COMPUTR: Flopy disk
COMPUTR: Flopy disk
COMPUTR: Flopy disk
COMPUTR: PC-DOS/NS-DOS
SOFTWARE: Microsoft Word 6.0 / ASCII text output
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/851,138
FILING DATE: 09-May-2001
PRICATION NUMBER: 09/836,075
FILING DATE: 20 Oct 1994
APPLICATION NUMBER: EP 94870166.9
FILING DATE: 28 Jun 1995
ATTORNEY AGENT INFORMATION:
ANAME, KAMMEDEN BATE: 28 Jun 1995
ATTORNEY AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 319;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 977; DB 9; I. Pred. No. 1.4e-77; 3; Mismatches 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: KAMMERER, PATRICIA A.
REGISTRATION NUMBER: 29,775
REFERENCE/DOCKET NUMBER: INNS:004
INFORMATION FOR SEQ ID NO: 42:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: linear
MOLECULE TYPE: peptide
SEQUENCE DESCRIPTION: SEQ ID NO: 42:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; Sequence 229, Application US/10651165; Publication No. US20040047877A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 319 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 93.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 93.7°
Matches 179; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ||||||||||||
LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 4
US-10-651-165-229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-851-138-42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: MAERTENS, GEERT STUYVER, LIEVEN TITLE OF INVENTION: NEW SEQUENCES OF HEPATITIS C VIRUS GENOTYPES AND THEIR USE AS PROPHYLACTIC, THERAPEUTIC AND DIAGNOSTIC NUMBER OF SEQUENCES: 207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                    RROPI PKAROPOGRHWAOPGY PWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                               61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                           121 KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121 KVIDTLTCGFADLMGYIPVVGAPVGGVARALAHGVRLLEDGVNYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MSTNPKPQRKTKRNTNRRPMDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: DELENS, ROBERT
APPLICANT: DELENS, ROBERT
APPLICANT: MAERTENS, Geert
TITLE OF INVENTION: INMUNDOMINANT HUMAN T CELL EPITOPES OF HEPATITIS C
TITLE OF INVENTION: VIRUS
FILE REFERENCE: 2551-94
CURRENT APPLICATION NUMBER: US/10/651,165
CURRENT APPLICATION NUMBER: US/08/974,690C
PRIOR FILING DATE: 1997-11-19
PRIOR FILING DATE: 1997-11-19
PRIOR FILING DATE: 1994-10-28
PRIOR FILING DATE: 1994-10-28
PRIOR FILING DATE: 1993-11-04
NUMBER OF SEQ ID NOS: 286
SOFTWARE: Patentin Version 3.1
SEQ ID NO 217
LENGTH: 319
                                                                                                                                  KV1DTLTCGFADLMGY1PVVGAPLGGVAAALAHGVRA1EDG1NYATGNLPGCSFS1FLLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 319;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 980; DB 15;
Pred. No. 7.6e-78;
4; Mismatches 8;
                                                                                                                                                                                                                                                                                                                                                                                             Sequence 217, Application US/10651165
Publication No. US20040047811
GENERAL INFORMATION:
APPLICANT: LEROUX-ROELS, Geert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-851-138-42; Sequence 42, Application US/09851138; Publication No. US20020183508A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 93.7%;
Matches 179; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: PRT
; ORGANISM: hepatitis C virus
US-10-651-165-217
                                                                                                                                                                                                                                                           |||||||||||
181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181 LLSCLTVPASA 191
                                                                                                                                                                                                                           181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                              RESULT 2
US-10-651-165-217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                    61
                                                                                                                                  121
```

쉽

g

ò

쉽

ò

셤 ઠે

ò

120

```
61 RRQPIPKVRRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSRNLG 120
                                                                                                                                                                                                                                               121 KVIDTLTCGFADLMGYIPLVGAPLGGAARALAHGVRVLEDGVMYATGNLPGCSFSIFLLA 180
                                                                           1 MSTIPKPORKTKRNTNRRPODVKFPGGGOIVGGVYLLPRRGPRLGVRATRKTSERSOPRG 60
                                                                                                                                                                                                                    KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ANTIGENS FOR THE DETECTION OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             93.5%; Score 977; DB 9; Length 2894;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY: USA
COUNTRY: USA
COUNTRY: USA
COMPUTER READABLE FORM:
MEDIUW TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: Batentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION DATA:
RILING DATE: 30-Aug-2001
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MAERTENS, GEERT
VAN HEUVERSWUN, HUGO
TITLE OF INVENTION: SYNTHETIC ANTIGENS FOR THE DETEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION UNMER: 08/391,671
FILING DATE: 1395-02-21
APPLICATION NUMBER: WO PCT/EP91/02409
FILING DATE: 13-DEC-1991
APPLICATION NUMBER: EP 90124241.2
FILING DATE: 14-DEC-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSE: NIXON & VANDERHYE P.C.
STREET: 1100 NORTH GLEBE ROAD
CITY: ARLINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE DESCRIPTION: SEQ ID NO: 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
NAME: SADOFF, B.J.
RECISTRATION NUMBER: 36,663
REPERENCE/DOCKET NUMBER: 1487
TELECOMMUICATION INFORMATION:
TELEPHONE: 7038164000
TELEPAX: 7038164100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 23, Application US/09941611
Patent No. US2002010640A1
GENERAL INFORMATION:
APPLICANT: DELEYS, ROBERT J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
LENGTH: 2894 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO: 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY: linear
MOLECULE TYPE: peptide
HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                             181 LLSCLTVPASA 191
                                                                                                                                                                                                                                                                                                                    LLSCLTTPASA 191
                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                    셤
                                                                                                                       ઠે
                                                                                                                                                            유
                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 181, Application US/10651165

Publication No. US20040047877A1

GENERAL INFORMATION:

APPLICANT: LEROUX-ROELS, Geert

APPLICANT: DELEYS, ROBERT

TITLE OF INVENTION: UNMUNDOMINANT HUMAN T CELL EPITOPES OF HEPATITIS C

TITLE OF INVENTION: UNMUNDOMINANT HUMAN T CELL EPITOPES OF HEPATITIS C

TITLE OF INVENTION: UNMUNDOMINANT HUMAN T CELL EPITOPES OF HEPATITIS C

TITLE OF INVENTION: UNMUNDOMINANT HUMAN T CELL EPITOPES OF HEPATITIS C

TITLE OF INVENTION: UNMUNDOMINANT HUMAN T CELL EPITOPES OF HEPATITIS C

TITLE OF INVENTION: UNMUNDOMINANT HUMAN T CELL EPITOPES OF HEPATITIS C

TITLE OF INVENTION: UNMUNDOMINANT HUMAN T CELL EPITOPES OF HEPATITIS C

TITLE OF INVENTION: UNMUNDOMINANT HUMAN T CELL EPITOPES OF HEPATITIS C

PRIOR FILING DATE: 1997-11-10-10-28

PRIOR FILING DATE: 1997-11-10-4

NUMBER OF SEQ ID NOS: 286

PRIOR FILING DATE: 1993-11-04

NUMBER OF SEQ ID NOS: 286

SEQ ID NO 181

LENGTH: 450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 RRQPIPKVRQPTGRSWGQPGYPWPLYGNEGCGWAGWLLSPRGSRPWWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MSTLPKPORKTKRNTNRRPMDVKFPGGGOIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSOPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 319;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 15; Length 450;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 977; DB 15;
Pred. No. 1.4e-77;
3; Mismatches 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 977; DB 15
Pred. No. 2e-77;
6; Mismatches
                                                                                                                                                                                                               NAME/KEY: MISC FEATURE LOCATION: (128). OTHER INFORMATION: Xaa is any amino acid
                                                                                                                                                                                                                                                                                                               NAME/KEY: MISC FEATURE LOCATION: (308).
OTHER INFORMATION: Xaa is any amino acid
                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: MISC FEATURE

LOCATION: (310)...(310)

COTHER INFORMATION: Xaa is any amino acid
US-10-651-165-229
PRIOR APPLICATION NUMBER: EP 93402718.6 · PRIOR FILING DATE: 1993-11-04 NUMBER OF SEQ ID NOS: 286 SOFTWARE: Patentin version 3.1 ERQ ID NO 229 LENGTH: 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 93.7%;
Matches 179; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 92.1%;
Matches 176; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT ORGANISM: hepatitis C virus
                                                                                                                                                                      ORGANISM: hepatitis C virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-651-165-181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-651-165-18
                                                                                                                                                                                                 FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
```

9

180

Fri

셤

셤 ò a ò

ઠે

a

ઠે

us-09-084-691b-206.rapb

```
61 RROPI PKVRRPEGRTWAOPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                    121 KVIDTLTCGFADLMGYIPLVGAPLGGAARALAHGVRVLEDGVNYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                        1 MSTIPKPORKTKRNTNRRPQDVKFPGGGOIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                      RRQP1PXARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG
                                                                                                                                                                                                                                                                                                                                             KVIDTLTCGFADLMGY1PVVGAPLGGVAAALAHGVRA1EDGINYATGNLPGCSFSIFLLA
                                                                                                                                                         1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MAERTENS, GEERT
VAN HEUVERSWUN, HUGO
TITLE OF INVENTION: SYNTHETIC ANTIGENS FOR THE DETECTION OF
ANTIBODIES TO HEPATITIS C VIRUS
                                                                                                               ;
                                                                        Length 2894;
                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATURG SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/10/044,995
FILING DATE: 15-Jan-2002
FILING DATE: 15-Jan-2002
FILING DATE: -CINKINGWIN
APPLICATION NUMBER: US 07/920,286
FILING DATE: -LOCT-1992
APPLICATION NUMBER: WO PCT/EP91/02409
FILING DATE: 13-DEC-1991
                                                                     Score 977; DB 14;
Pred. No. 1.5e-76;
                                                                                                               6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: EP 90124241.2
FILLING DATE: 14-DEC-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
RADDRESSER: NIXON & VANDERHYE P.C.
STREET: 1100 NORTH GLEBE ROAD
CITY: ARLINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/10/822,871
FILING DATE: 13-Apr-2004
CLASSIFICATION: «Unknown»
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1487-5
    SEQUENCE DESCRIPTION: SEQ ID NO: 23:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REGISTRATION NUMBER: 36,663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 23, Application US/10822871
Publication No. US20050003345A1
GENERAL INFORMATION:
APPLICANT: DELEYS, ROBERT J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FELEPHONE: 7038164000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: 7038164100
INFORMATION FOR SEQ ID NO: 23:
SEQUENCE CHARACTERISTICS:
                                                                     93.5%;
92.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZIP: 22201
COMPUTER READABLE FORM:
                                                                                                               Matches 176; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                   181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                            |||||| ||||
181 LLSCLTVPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: SADOFF,
                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STATE: VA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF
             ;
US-10-044-995-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 8
US-10-822-871-23
                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             원
                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                          ò
                           ö
                                                                                                                                                              61 RROPIPKAROPOGRHWAOPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                        61 RROPIPKVRRPEGRIWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSRNLG 120
                                                                                                                                                                                                                                                  KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                              121 KVIDTLTCGFADLMGYIPLVGAPLGGAARALAHGVRVLEDGVNYATGNLPGCSFSIFLLA 180
                                                                        9
                                                                                                                  1 MSTIPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60
                                                                        1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        POLLET, DIRK
MARKTENS, GERT
VAN HEUVERSWUN, HUGO
TITLE OF INVENTION: SYNTHETIC ANTIGENS FOR THE DETECTION OF
ANTIBODIES TO HEPATITIS C VIRUS
                           ;
0
                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.30
    Pred. No. 1.5e-76;
6; Mismatches 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 08/391,671
FILING DATE: «Unknown»
APPLICATION NUMBER: US 07/920,286
FILING DATE: 14-OCT-1992
APPLICATION NUMBER: WO PCT/EP91/02409
FILING DATE: 13-DEC-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/044,995
FILING DATE: 15-Jan-2002
CLASSIFICATION: <UNKNOWN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: EP 90124241.2 FILING DATE: 14-DEC-1990 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: NIXON & VANDERHYE P.C. STREET: 1100 NORTH GLEBE ROAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: SADOFF, B.J.
REGISTRATION NUMBER: 36,663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      %5-10-044-995-23

%Sequence 23, Application US/10044995

%Publication No. US20030049685A1

GENERAL INFORMATION:

APPLICANT: DELEYS, ROBERT J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 2894 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE: 7038164000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEO ID NO: 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS
92.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: 7038164100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: peptide
HYPOTHETICAL: NO
ANTI-SENSE: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 2:
CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: amino acid
  Best Local Similarity 92.1
Matches 176; Conservative
                                                                                                                                                                                                                                                                                                                                                                                       181 LLSCLTVPASA 191
                                                                                                                                                                                                                                                                                                                                             181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: ARLINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION FOR
                                                                                                                                                                                                                                                      121
```

```
LENGTH: 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                            121 KVIDTLFCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                RROPI PKAROPOGRHWAOPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                61 RRQPIPKVRRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                             WESTON 1965-620-54

Sequence 54, Application US/10365620

PUBLication No. US20040001853A1

GENERAL INFORMATION:
APPLICANT: George, Rajan
APPLICANT: Tyre11, Lone
APPLICANT: Tyre11, Lone
TITLE OF INVENTION: Chimeric Antigens for Eliciting An Immune Response
TITLE REFERENCE: 65.0016
TITLE OF INVENTION NUMBER: US/10/365,620
CURRENT FILING DATE: 2003-11-05
PRIOR APPLICATION NUMBER: 60/329,578
PRIOR FILING DATE: 2003-11-05
PRIOR FILING DATE: 2003-11-05
PRIOR FILING DATE: 2002-06-20
NUMBER OF SEQ ID NOS: 76
SEQ ID NOS: 76
SEQ ID NO 54
LENGTH: 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31 MSTNPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPPRGPRLGVRATRKTSERSQPRG 90
                                                                                                                                                                                                                         1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ô
                                                                                                                                                                                         ö
                                                                                                                                                    93.5%; Score 977; DB 17; Length 2894; 92.1%; Pred. No. 1.5e-76; tive 6; Mismatches 9; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 93.4%; Score 976; DB 15; Length 249; Best Local Similarity 92.7%; Pred. No. 1.3e-77; Matches 177; Conservative 5; Mismatches 9; Indels
                                                                             ANTI-SENSE: NO
SEQUENCE DESCRIPTION: SEQ ID NO: 23:
US-10-822-871-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; TYPE: PRT
; ORGANISM: ORF of HCV Core Protein
US-10-365-620-54
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
HYPOTHETICAL: NO
                                                                                                                                                                    Best Local Similarity 92.1
Matches 176; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                               181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                               181 LLSCLTVPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          211 LLSCLTVPASA 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                            61
                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                            ద
                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
```

```
US-10-651-165-179

Sequence 179, Application US/10651165

Publication No. US2004004787A1

GENERAL INFORMATION:
APPLICANT: LEROUX-ROELS, Geert
APPLICANT: DELEAS, Robert
TITLE OF INVENTION: IMMUNODOMINANT HUMAN T CELL EPITOPES OF HEPATITIS C
TITLE OF INVENTION: UNRUS
TITLE OF INVENTION: UNRUS
TITLE OF INVENTION: UNRUS
CURRENT APPLICATION NUMBER: US/10/651,165
CURRENT APPLICATION NUMBER: US/08/974,690C
PRIOR APPLICATION NUMBER: PCT/EP94/03555
PRIOR FILING DATE: 1997-11-19
PRIOR APPLICATION NUMBER: EP94-10-28
PRIOR FILING DATE: 1994-10-28
PRIOR FILING DATE: 1994-11-0-28
PRIOR FILING DATE: 1993-11-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           91 RRQPIPKARRPEGRIWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPIDPRRRSRNLG 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WESOUR 100
US-10-912-969-56

Sequence 56, Application US/10912969

Publication No. US20050013828A1

GENERAL INFORMATION:
APPLICANT: Virexx Research, Inc.
APPLICANT: George, Rajan
APPLICANT: Wang, Dakun
APPLICANT: Wang, Dakun
TITLE OF INVENTION: Chimeric Antigens for Eliciting An Immune Response
TITLE REFERENCE: 17506-007001
CURRENT APPLICATION NUMBER: US 60/390,564
PRIOR PILICATION NUMBER: US 60/390,564
PRIOR PILICATION NUMBER: US 60/423,578
PRIOR PILICATION NUMBER: US 60/423,578
PRIOR APPLICATION NUMBER: US 60/423,578
PRIOR APPLICATION NUMBER: US 10/365,620

PRIOR PILING DATE: 2003-02-13
PRIOR PILING DATE: 2003-02-13
PRIOR PILING DATE: 2004-02-14

SETIOR PILING DATE: 2004-02-14

NUMBER OF SEQ ID NOS: 79

SSOFTWARE: Patentin version 3.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31 MSTNPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RROPIPKAROPOGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MSTLPKPORKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                93.4%; Score 976; DB 17; Length 249; 92.7%; Pred. No. 1.3e-77; ive 5; Mismatches 9; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; TYPE: PRT
; ORGANISM: Hepatitis C virus
US-10-912-969-56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 92.7
Matches 177; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          211 LLSCLTVPASA 221
```

ø

```
) ORGANISM: ORF of HCV Core-TBD protein US-10-365-620-56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-912-969-58
; Sequence 58, Application US/10912969
; Publication No. US20050013828A1
; GENERAL INFORMATION:
; APPLICANT: Virexx Research, Inc.
                                                                                  ; Sequence 56, Application US/10365620; Publication No. US20040001853A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                 SOFTWARE: Patentin version 3.2
SEQ ID NO 56
LENGTH: 473
                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 92.7%;
Matches 177; Conservative
181 LLSCLTVPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |||||||
|LLSCLTVPASA 221
                                                         RESULT 13
US-10-365-620-56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                TYPE: PRT
                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                               61 RRQPIPKARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                     61 RRQPIPKARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSRNLG 120
                                                                                                                                                                                                                                61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                       KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MSTNPKPQRKTKRNTNRRPQDVKFPGGGIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MSTNPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                        1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .;
0
                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 976; DB 15; Length 450;
Pred. No. 2.5e-77;
5; Mismatches 9; Indels
                                                                                                                Length 450;
                                                                                                                                            9; Indels
                                                                                                           Score 976; DB 15;
Pred. No. 2.5e-77;
5; Mismatches 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                             ; Sequence 180, Application US/10651165; Publication No. US20040047877A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        93.4%;
 NUMBER OF SEQ ID NOS: 286
SOFTWARE: Patentin version 3.1
SEQ ID NO 179
LENGTH: 450
                                                                                                                Query Match
Best Local Similarity 92.7%;
Matches 177; Conservative
                                                                     ORGANISM: hepatitis C virus US-10-651-165-179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; ORGANISM: hepatitis C virus US-10-651-165-180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 92.7
Matches 177; Conservative
                                                                                                                                                                                                                                                                                                                                                                   181 LLSCLTVPASA 191
                                                                                                                                                                                                                                                                                                                                               LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181 LLSCL1'TPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-651-165-180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                             181
                                                           TYPE: PRT
                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       දු
                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                        8
                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
```

```
180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              91 RRQPIPKARRPEGRIWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSRNLG 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Tyrical, normal APPLICANT: Tyrical, normal APPLICANT: Tyrical, lorne APPLICANT: Tyrical, lorne APPLICANT: Noujaim, Antoine APPLICANT: Wang, Dakun APPLICANT: Wang, Dakun APPLICANT: Ma, Allan APPLICATION NUMBER: US/10/912,969
CURRENT FILING DATE: 2004-08-05
FRIOR PILING DATE: 2002-06-20
FRIOR PILING DATE: 2002-06-20
FRIOR PILING DATE: 2003-02-13
FRIOR PILING DATE: 2003-02-13
FRIOR FILING DATE: 2003-02-13
FRIOR FILING DATE: 2003-02-13
FRIOR FILING DATE: 2003-02-13
FRIOR FILING DATE: 2003-02-14
FRIOR FILING DATE: 2003-02-14
FRIOR FILING DATE: 2003-02-14
FRIOR FILING DATE: 2003-02-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KV1DTLTCGFADLMGY1PVVGAPLGGVAAALAHGVRA1EDG1NYATGNLPGCSFS1FLLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MSTLPKPORKTKRNTNRRPTDVKFPGGGOIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
APPLICANT: George, Rajan
APPLICANT: Tyrrell, Lorne
APPLICANT: Tyrrell, Lorne
APPLICANT: Tyrrell, Lorne
TYLLE OF INVENTION: Chimeric Antigens for Bliciting An Immune Response
FILE REFERENCE: 656.0016
CURRENT APPLICATION NUMBER: US/10/365,620
CURRENT FILING DATE: 2003-20-13
PRIOR APPLICATION NUMBER: US60/423,578
PRIOR APPLICATION NUMBER: 60/390,564
PRIOR FILING DATE: 2003-11-05
PRIOR FILING DATE: 2002-06-20
NUMBER: OF SEQ ID NOS: 766-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 976; DB 15; Length 473; Pred. No. 2.6e-77; 5; Mismatches 9; Indels (
```

```
ઠે
                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: George, Rajan
APPLICANT: Tyrrell, Lorne
APPLICANT: Tyrrell, Lorne
APPLICANT: Noujaim, Antoine
APPLICANT: Noujaim, Antoine
APPLICANT: Wang, Dakun
APPLICANT: Ma, Allan
TITLE REPRENTION: CHIMERIC ANTIGENS FOR BREAKING HOST TOLERANCE TO FOREIGN ANTIGENS
FILE REFERENCE: 17506-006001
CURRENT FILING DATE: 2004-08-05
PRIOR FILING DATE: 2004-08-08
NUMBER OF SEQ ID NOS: 51
SOFTWARE: Patentin version 3.2
SOFTWARE: Patentin version 3.2
LENGTH: 473
                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                            91 RRQPIPKARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSRNLG 150
                                                                                                                                                                                                                                                                                                                                                                                                                 KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                      KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                    61 RROPIPKAROPOGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 RROPIPKARQPOGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  31 MSTNPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MSTLPKPORKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31 MSTNPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 90
                                                                                                                                                                                                                                                          1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                             Length 473;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 473;
                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                           93.4%; Score 976; DB 17;
92.7%; Pred. No. 2.6e-77;
tive 5; Mismatches 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
93.4%; Score 976; DB 17;
Best Local Similarity 92.7%; Pred. No. 2.6e-77;
Matches 177; Conservative 5; Mismatches 9;
                                                         TYPE: PRT
ORGANISM: Artificial
FEATURE:
OTHER INFORMATION: Synthetic Construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ) OTHER INFORMATION: Synthetic Construct US-10-913-171-39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 39, Application US/10913171; Publication No. US20050031628A1; GENERAL INFORMATION: APPLICANT: Virexx Research, Inc.
SOFTWARE: PatentIn version 3.2
SEQ ID NO 58
LENGTH: 473
                                                                                                                                                                         Query Match
Best Local Similarity 92.77
Matches 177; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 211 LLSCLTVPASA 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Artificial FEATURE:
                                                                                                                                      US-10-912-969-58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-913-171-39
                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           151
                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                        엄
                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                      요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
```

```
Db 211 LLSCLTVPASA 221
Search completed: July 15, 2005, 10:20:47
Job time : 166 secs
```

181 LLSCLTTPASA 191

This Page Blank (USDIO)

```
5.1.6
Compugen Ltd.
GenCore version
Copyright (c) 1993 - 2005
```

model
3
using
search,
protein
•
protein
ĕ

July 15, 2005, 09:53:38; Search time 16 Seconds (without alignments) 1148.588 Million cell updates/sec Run on:

Title: Perfect score: Sequence:

US-09-084-691B-206 1045 1 MSTLPKPQRKTKRNTNRRPT......CSFSIFLLALLSCLTTPASA 191

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

283416 segs, 96216763 residues Searched:

283416 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

PIR_79:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

		æ			SUMMARIES	
Result No.	Score	Query Match	Length	DB	ID	Description
7	977	93.5	ŀ	ļ -	S40770	genome polyprotein
7	916	93.4		Н	GNWVCH	
٣	971	92.9		7	S12707	
4	696	92.7		~	S18031	
ß	696	92.7	787	~	PN0677	
9	968	92.6	3011	Н	GNWVC3	
7	965	92.3	3010	-	GNWVCJ	
80	965	92.3	3010	-	GNWVTC	
0	962	92.1	550	~	JH0711	
10	961	92.0	640	~	JQ1584	
11	959	91.8	189	7	S32740	
12	958	91.7	782	7	\$19876	genome polyprotein
13	957	91.6	513	7	PC1284	genome polyprotein
14	957	91.6	782	7	S19875	genome polyprotein
15	957	91.6	876	7	PC2219	polypeptide - hepa
16	926	91.5	3010	-	GNWVTW	genome polyprotein
17	926	91.5	3010	Н	S18030	genome polyprotein
18	952	91.1	520	~	JQ1925	
19	951	91.0	411	~	PC2060	
20	948	90.7	3010	H	A45573	
21	947	90.6	369	0	S21471	
22	947	90.6	523	N	JQ1926	
23	947	90.6	782	~	S18032	genome polyprotein
	946	90.5	492	7	S41288	
25	944	90.3	411	7	PC2061	
	941	90.0	874	7	JQ0883	
27	940	90.0	513	~	A44150	
28	939	89.9	874	~	JQ0881	genome polyprotein
29	939	89.9	3033	-	JQ1303	

8 8 8

	genome polyprotein														
GNWVJ8	PS0388	JN0265	JC5620	S41360	841361	PQ0393	S41346	841362	S41363	S41345	S41364	S41365	S41366	S41344	841358
ч	~	~	Н	0	N	7	N	~	N	N	ď	~	N	~	0
3033	178	322	3014	124	123	566	118	114	117	115	115	114	114	115	114
9.68	87.9	87.8	85.5	61.9	8.09	60.4	59.9	59.0	58.6	58.5	58.4	58.3	57.9	57.9	57.8
936	919	918	893	647	635	631.5	626	617	612	611	610	609	605	605	604
30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45

ALIGNMENTS

•	RESULT 1 S40770 genome polyprotein - hepatitis C virus NiContains: capsid protein C; envelope protein M; hepacivirin (EC 3.4.21.98) (nonstructure) protein NS4a; nonstructural protein NS4b; nonstructural protein NS5 C;Species: hepatitis C virus C;Species: hepatitis C virus C;Date: 19-May-2000 #sequence_revision 19-May-2000 #text_change 09-Jul-2004 C;Accession: 840770; PC1285 R;Okamoto, H. Submitted to the EMBL Data Library, March 1992 A;Reference number: 840770 A;Accession: \$40770 A;Molecule type: genomic RNA A;Molecule type: genomic RNA A;Residues: 1-3011 cOKA> A;Cross-references: UNIPROT:003463; EMBL:D10749; NID:g221586; PIDN:BAA01582.1; PID:g2215 R;Okamoto, H.; Okada, S.; Sugiyama, Y.; Yotsumoto, S.; Tanaka, T.; Yoshizawa, H.; Tsuda, Jpn. J. Exp. Med. 60, 167-177, 1990
	A,Title: The S'-terminal sequence of the hepatitis C virus genome. A,Fitle: The S'-terminal sequence of the hepatitis C virus genome. A,Reference number: PC1284, MUID:91013116; PMID:2170712 A,Residues: 1-53 -6023 A,Gresidues: 1-53 -6023 A,Cross-references: GB:D00831; NID:9221511; PIDN:BAA00705.1; PID:9221512 A,Experimental source: isolate HC-J1 C,Reywords: ATP; glycoprotein; hydrolase; nucleotide binding; P-loop; polyprotein; C;Reywords: Apply approtein; Hydrolase; nucleotide binding; P-loop; polyprotein; F;2-115/Product: capsid protein C #status predicted <epc> F;116-191/Product: major envelope protein M #status predicted <nes> F;130-729/Product: nonstructural protein NS1 #status predicted <ns1> F;30-1006/Product: nonstructural protein NS2 #status predicted <ns1> F;1007-1615/Product: nonstructural protein NS2 #status predicted <ns2> F;1207-1317/Region: nucleotide-binding motif A (P-loop)</ns2></ns1></ns1></nes></epc>
	F;1316-1319/Region: DEXH motif F;1616-1862/Product: nonstructural protein NS4a #status predicted <n4a> F;1616-1862/Product: nonstructural protein NS4b #status predicted <n4b> F;1014-3011/Product: nonstructural protein NS5 #status predicted <ns5> Query Match Query Match Best Local Similarity 92.1%; Pred. No. 2.9e-74; Best Local Similarity 92.1%; Pred. No. 2.9e-74; Matches 176; Conservative 6; Mismatches 9; Indels 0; Gaps 0; QY MSTLPREPREMENTARYTOWEPEGGQIVGGYLLPRRCPRIGVRATRYTSERSOPRG 60 </ns5></n4b></n4a>

```
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 09-Jul-2004
C;Accession: S12707
R:Takeuchi, K.; Kubo, Y.; Boonmar, S.; Watanabe, Y.; Katayama, T.; Choo, Q.L.; Kuo, G.;
Nucleic, Acids Res. 18, 4626, 1990
A;Title: Nucleotide sequence of core and envelope genes of the hepatitis C virus genome A;Reference number: S12707; MUD: 90356432; PMID: 2117749
A;Accession: S12707
A;Molecule type: genomic RNA
A;Residues: 1-441 <TAK>
A;Cross-references: UNIPROT: Q81776; EMBL: D00574; NID: 9221656; PIDN: BAA00452.1; PID: 92216
C;Superfamily: hepatitis C virus genome polyprotein
C;Keywords: polyprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cyfaces 3.0-cum.-1924 medydence_review of the control of the cession is 18031
R;Honda, M.; Kaneko, S.; Masashi, U.; Kobayashi, K.; Murakami, S.
B;Honda, M.; Kaneko, S.; Masashi, U.; Kobayashi, K.; Murakami, S.
B;Honda, M.; Kaneko, S.; Masashi, U.; Kobayashi, K.; Murakami, S.
B;Honda, M.; Kaneko, S.; Masashi, U.; Kobayashi, K.; Murakami, S.
A;Description: Sequence analysis of putative structural regions of Hepatitis C Virus iso
A;Recession: S18031
A;Accession: Subartis C Virus genome polyprotein
C;Keywords: capsid protein; core protein; envelope protein; glycoprotein; nonstructural
C;Keywords: capsid protein; core protein #status predicted <MAT2>
F;1927,Product: core protein #status predicted <MAT2>
F;384-733/Product: nonstructural protein 2 (fragment) #status predicted <MAT4>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       genome polyprotein - hepatitis C virus (isolate JK2) (fragment)
N;Contains: core protein; envelope protein 1; nonstructural protein 2; NS1/E2 protein
C;Species: hepatitis C virus
A;Vaziety: isolate JK2
C;Date: 30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KVIDTITCGFADIMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MSTINPKPQRKTKRNTINRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RRQPI PKARQPQGRHWAQPGY PWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 ŘŘÓPIPKARRPEGRTWAÓPGYPWPLYGNEGLGWAGWILSPRGSRPSWGPNDPRRRSRNLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MSTNPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RRQPI PKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                              Score 971; DB 2; Length 441;
Pred. No. 1.5e-74;
5; Mismatches 9; Indel8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 969; DB 2; Length 782;
Pred. No. 3.8e-74;
4; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                       92.9%;
92.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 92.7%;
Best Local Similarity 92.7%;
Matches 177; Conservative 4
                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity 92.7 Matches 177; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |||||||
|LLSCLTIPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S18031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                C.pate: 11-Dec-1992 #text_change 09-Jul-2004
C.pate: 11-Dec-1992 #text_change 09-Jul-2004
C.pate: 11-Dec-1992 #sequence_revision 31-Dec-1992 #text_change 09-Jul-2004
C.pate: 31-Dec-1992 #sequence_revision 31-Dec-1992 #text_change 09-Jul-2004
C.pate: 31-Dec-1992 #sequence_revision 31-Dec-1992 #text_change 09-Jul-2004
R.inchauspe, G. zebedee, S.; Lee, D.H.; Sugitani, M.; Nasoff, M.; Prince, A.M.
A.Reference number: A36814
A.Molecule type: genomic RNA
A.Reference number: A36814
A.Molecule type: genomic RNA
A.Reference number: A36814
A.Molecule type: genomic RNA
A.Reference number: A16814
A.Molecule type: genomic RNA
A.Title: Genomic structure of the human proctotype strain H of hepatitis C virus: compari
A.Reference number: A41546, MUID:92052256; PMID:1658800
A.Title: Genomic structure of the human proctotype strain H of hepatitis C virus: compari
A.Reference number: A41546, MUID:92052256; PMID:1658800
A.Contents: annotation
A.Contents: annotation
A.Contents: annotation
A.Contents: A1991
A.Contents: A1991
A.Title: Genomic structure
B.Title: A191
A.Title: Genomic structural protein # #status predicted cEPN
F.116-191/Product: envelope protein # #status predicted cNS2>
F.130-1306/Product: nonstructural protein NS2 #status predicted cNS2>
F.130-1307/Region: nucleotide-binding motif B
F.131-1119/Region: nucleotide-binding motif B
F.131-1119/Product: nonstructural protein NS4# #status predicted cNS2>
F.130-1307/Product: nonstructural protein NS4# #status predicted cNS2>
F.131-1119/Product: nonstructural protein NS4# #status predicted cNS2>
F.131-1119/Argion: nucleotide-binding motif B
                                                                                                                                                                                                                                                                                                                   genome polyprotein - hepatitis C virus (strain H)
N;Contains: capsid protein C; envelope protein M; hepacivirin (EC 3.4.21.98) (nonstructu protein NS4a; nonstructural protein NS4b; nonstructural protein NS5
C;Species: hepatitis C virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RRQPIPKARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 KVIDTLTCGFADLMGYIPLVGAPLGGAARALAHGVRVLEDGVNYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                        RRQPI PKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MSTNPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 3011;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 976; DB 1;
Pred. No. 3.5e-74;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             genome polyprotein - hepatitis C virus (fragment)
N,Contains: core protein; envelope protein
C,Species: hepatitis C virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    93.4%;
92.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 92.7
Matches 177; Conservative
                                                                                                                   LLSCLTTPASA 191
                                                                                                                                                                           181 LLSCLTVPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LLSCLTVPASA 191
                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                       셤
                                                                                                                   ò
                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
```

ö

```
Ajexperimental source: isolates B-b17

Gisuperfamily: hepatitis C virus genome polyprotein;

Gisuperfamily: hepatitis C virus genome protein;

Fill-115/Product: capaid protein C #status predicted <CPC>

Fill-115/Product: major envelope protein B #status predicted <NBE>

Fill-116/Product: major envelope protein B #status predicted <NSI>

Fill-116/Product: nonstructural protein NS2 #status predicted <NS2>

Fill-116/Fyroduct: hepativirin #status predicted <NS3>

Fill-117/Region: nucleotide-binding motif A (P-loop)

Fill-1197/Region: bexH motif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fil616-1862/Product: nonstructural protein NS4a #status predicted <N4A>
Fil683-2013/Product: nonstructural protein NS4b #status predicted <NAB>
Fi2014-3011/Product: nonstructural protein NS5 #status predicted <NS5>
Fi205,209,234,305,325,417,423,430,448,476,532,540,556,576,623,645,1213,1255,2041,2077,27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      genome polyprotein - hepatitis C virus (strain J)
N;Contains: capsid protein C; envelope protein M; major envelope protein B; nonstructur
protein NS4s; nonstructural protein NS4b; nonstructural protein NS5
C;Species: hepatitis C virus
C;Date: 30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change 09-Jul-2004
C;Accession: A39253; PS0086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Accession: A39253
A;Accession: A39253
A;Molecule type: genomic RNA
A;Residues: 1-3010 <AXT.
A;Residues: 1-3010 <AXT.
A;Cross-references: UNIPROT:P26662; GB:D90208; NID:g221610; PIDN:BAA14233.1; PID:g221611
B;Kato, N.; Ohkoshi, S.; Shimotohno, K.
Broc. Jpn. Acad. 65B, 219-223, 1989
A;Title: Japanese isolates of the non-A, non-B hepatitis viral genome show sequence varı
A;Reference number: PS0085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A, Accession: PS0086
A, Molecule type: genomic RNA
A, Raperimental Bource: Japanese isolate
A, Experimental Bource: Japanese isolate
C, Comment: The cleavage sites of this polyprotein been determined.
C, Comment: The cleavage sites of this polyprotein
C, Superfamily: hepatitis C virus genome polyprotein
C, Superfamily: hepatitis C virus genome polyprotein
C, Reywords: ATP; glycoprotein; hydrolase; nucleotide binding; P-loop; polyprotein; c, Reywords: ATP; Typerduct: appsid protein C #status predicted <PPN
F;192-389/Product: monstructural protein NS1 #status predicted <NS2>
F;300-729/Product: nonstructural protein NS2 #status predicted <NS2>
F;100-729/Product: hepativirin #status predicted <NS2>
F;100-1615/Product: hepativirin #status predicted <NS3>
F;1030-1237/Region: nucleotide-binding motif A (P-loop)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R;Kato, N.; Hijikata, M.; Ootsuyama, Y.; Nakagawa, M.; Ohkoshi, S.; Sugimura, T.; Shimot
Proc. Natl. Acad. Sci. U.S.A. 87, 9524-9528, 1990
A;Title: Molecular cloning of the human hepatitis C virus genome from Japanese patients
A;Reference number: A39253; MUID:91088550; PMID:2175903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 RRQPIPKARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSRNLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MSTINPKPOKKNKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RROPIPKAROPOGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      92.6%; Score 968; DB 1; Length 3011; 91.6%; Pred. No. 1.6e-73; 1ve 6; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 91.63
Matches 175; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181 LLSCLTVPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  genome polyprotein - hepatitis C virus (strain HCV-1)
N;Contains: capsid protein C; envelope protein M; hepacivirin (EC 3.4.21.98) (nonstructu
protain NS4s; nonstructural protein NS4b; nonstructural protein NS5
C;Species: hepatitis C virus
C;Date: 30-Sep-1992 #sequence_revision 30-Sep-1992 #text_change 09-Jul-2004
C;Accession: A39166; PQ00403; PQ0404; PG0404; PG04
                                                                                                                                                                                                                                                                                                                          C;Species: hepatitis C virus
C;Species: hepatitis C virus
C;Species: hepatitis C virus
C;Date: 14-Jul-1994 #text_change 09-Jul-2004
C;Accession: PNG77
R;Cho, S. H.; Yoon, J.I.; Chang, J.E.; Ahn, B.M.; Lee, C.H.; Lee, Y.I.
Biochem. Biophys. Res. Commun. 196, 780-788, 1993
A;Title: Genomic typing of hepatitis C viruses from Korean patients: Implications of gen
A;Reference number: PN0677; MUID: 94059104; PMID: 8240354
A;Accession: PN0677
A;Molecule type: mRNA
A;Residues: 1-787 - CCHO.
A;Residues: 1-787 - CCHO.
A;Cross-references: UNIPROT: Q08244; GB:L20498; NID: 91381031; PIDN: AAB02608.1; PID: 913810
C;Superfamily: hepatitis C virus genome polyprotein
C;Superfamily: hepatitis C virus genome polyprotein
C;Superfamily: hepatitis C virus genome polyprotein
C;Superfamily: 1995, 235, 421, 427, 452, 536, 580, 627, 649/Binding site: carbohydrate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RROPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RRQPIPKARQPEGRAWAQPGYPWPLYGNEGLGWAGWLLSPRGSRPSWGPTDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          pothetical protein 787 - hepatitis C virus (fragment)
Species: hepatitis C virus
Date: 14-Jul-1994 #sequence_revision 14-Jul-1994 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 787;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 969; DB 2;
Pred. No. 3.8e-74;
4; Mismatches 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Molecule type: genomic RNA
A;Residues: 1577-1633 <CHA>
A;Cross-references: DDBJ:D10128
A;Experimental source: isolates E-b16
A;Accession: PQ0404
A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 92.7%;
Best Local Similarity 92.7%;
Matches 177; Conservative
                                                        ||||||
|LLSCLTIPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LLSCLTIPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Status: preliminary
A;Molecule type: genomic RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
        181
                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                    hypothetical
                                                                                   셤
        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Б
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
```

9 9

Gaps

ö

```
genome polyprotein - hepatitis C virus (strain PRC1) (fragments)
N;Contains: envelope protein E1; envelope protein E2; nonstructural protein NS1; nonstru C;Species: hepatitis C virus
C;Date: 17-Apr-1993 #sequence_revision 17-Apr-1993 #text_change 09-Jul-2004
C;Accession: JH0711
R;Liu, K.; Hu, Z.; Li, H.; Prince, A.M.; Inchauspe, G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Octobrotein - hepatitis C virus (atrain U.K.) (fragment)
N;Contains: core protein C; envelope protein E1; envelope protein E2; nonstructural prot C; Species: hepatitis C virus
C;Species: hepatitis C virus
C;Date: 17-Apr-1993 #sequence_revision 17-Apr-1993 #text_change 09-Jul-2004
C;Accession: JQ1584
R;Kumar, U.; Cheng, D.; Thomas, H.; Monjardino, J.
J; Man, Virol. 73, 1521-1525, 1992
A;Title: Cloning and sequencing of the structural region and expression of putative core A;Reference number: JQ1584; MUID:92300349; PMID:1318944
A;Accession: JQ1584
A;Accession: JQ1584
A;Accession: JQ1584
A;Accession: JG1584
A;Accession: J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
RROPI PKAROPOGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MSTNPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKASERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 92.1%; Score 962; DB 2; Length 550; Best Local Similarity 91.6%; Pred. No. 1.1e-73; Matches 175; Conservative 6; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   in China
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Title: Genomic typing of hepatitis C viruses present i
A;Reference enomber: JH0711; MUID:92290283; PMID:1318245
A;Accession: JH0711
                                                                                                                     191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LLSCLTTPASA 191
                                                                                                                                                                                        LLSCLTTPASA
                                                                                                                     LLSCLTTPASA
                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                           121
                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JQ1584
                                           셤
                                                                                                                 ò
                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C.) Species: Integrative virtue virtu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         genome polyprotein - hepatitis C virus
N;Contains: capsid protein C; envelope protein M; hepacivirin (EC 3.4.21.98) (nonstructu
protein NS4s; nonstructural protein NS4b; nonstructural protein NS5
C;Species: hepatitis C virus
C;Date: 31-Mar-1992 #sequence_revision 31-Mar-1992 #text_change 09-Jul-2004
                                   F;1316-1319/Region: DEXH motif
F;1616-1862/Product: nonstructural protein NS4a #status predicted <N4A>
F;1616-1862/Product: nonstructural protein NS4b #status predicted <N4B>
F;10863-2013/Product: nonstructural protein NS5b #status predicted <NS5>
F;2014-3010/Product: nonstructural protein NS5 #status predicted <NS5>
F;106,209,234,250,305,325,417,423,430,448,532,556,576,623,645,1213,1255,2041,2077,2240,
                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 RRQPIPKARRPEGRIWAQPGYPWPLYGNEGMGWAGWLLSPRGSRPSWGPTDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 KVIDTLTCGFADLMGYIPLVGAPLGGAARALAHGVRVLEDGVNYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 RRQPIPKARRPEGRTWAQPGYPWPLYGNEGLGWAGWLLSPRGSRPSWGPTDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MSTNPKPORKTKRNTNRRPODVKFPGGGOIVGGVYLLPRRGPRLGVRAPRKTSERSOPRG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MSTNPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RRQPIPKARQPGGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG
                                                                                                                                                                                                                                                                                                                                                                                                                           MSTLPKPORKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                     ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   92.3%; Score 965; DB 1; Length 3010;
llarity 92.1%; Pred. No. 2.9e-73;
Conservative 5; Mismatches 10; Indels
                                                                                                                                                                                                                                                                          Length 3010;
                                                                                                                                                                                                                                                                      92.3%; Score 965; DB 1; Length 30 92.1%; Pred. No. 2.9e-73; ive 5; Mismatches 10; Indels
   nucleotide-binding motif
DEXH motif
                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 92.1:
Matches 176; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181 LLSCLTIPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
nes 176; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
```

ω.

K.; Murakami,

```
U.; Kobayashi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       91.6%;
91.6%;
   S.; Masashi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 175; Conservative
                                                                                                                                                                                                                                                                                                                             Best Local Similarity 91.6
Matches 175; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LLSCLTIPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LLSCLTIPASA
                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity
   M.; Kaneko,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Accession: PC1284
                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ∂୍ରଶ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
F;390-640/Product: envelope protein E2 and nonstructural protein NS1 #status predicted <
F;196,209,234,305,417,430,448,476,540,556,576,623/Binding site: carbohydrate (Asn) (cova
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      genome polyprotein - hepatitis C virus (isolate JKS) (fragment)
N;Contains: core protein; envelope protein 1; nonstructural protein 2; NSI/E2 protein C;Species: hepatitis C virus
A;Variety: isolate JKS
C;Date: 30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change 09-Jul-2004
C;Accession: S19876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S32740
polyprotein - hepatitis C virus (isolate Russian) (fragment)
N;Contains: capsid protein C; envelope protein M
C;Species: hepatitis C virus
C;Date: 19-Mar-1997 #sequence_revision 05-Dec-1998 #text_change 09-Jul-2004
C;Date: 19-Mar-1997 #sequence_revision 05-Dec-1998 #text_change 09-Jul-2004
C;Accession: S32740
R;Vassilev, V.B.; Vlazov, S.O.; Kotova, E.Y.; Nosikov, V.V.
S;Description: Evidence of new HCV variant of European isolate in Russia.
A;Reference number: S32740
A;Accession: S32740
A;Accession: S32740
A;Residues: 1-189 < vAs>
A;Cross-references: UNIPROT.068873; EMBL:X71407
C;Superfamily: hepatitis C virus genome protein
C;Keywords: capsid protein; envelope protein; polyprotein
C;Keywords: capsid protein; envelope protein M #status predicted <CPC>
F;116-189/Product: envelope protein M #status predicted <CPC>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                             ö
                                                                                                                                                                                                                                 61 RRQPIPKARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPPRRSRNLG 120
                                                                                                                                                                                                                                                                                                         121 KVIDTLTCGFADLMGYIPLVGVPLGGAARALAHGVRVLEDGVNYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RRQPIPKARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSRNLG 120
                                                                                                                                                                                                          RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                     KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                    9
                                                                                                                                1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MSTNPKPQRKTKRNTNRRPQDVKFPGVGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                1 MSTNPKPOROTKRNTNRRPDDVKFPGGGOIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA
                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                             .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                       Length 640;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 189;
                                                                                           IndelB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10; Indels
                                                                                           11;
                                                     Query Match 92.0%; Score 961; DB 2; Best Local Similarity 91.1%; Pred. No. 1.5e-73; Matches 174; Conservative 6; Mismatches 11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 959; DB 2;
Pred. No. 6.9e-74;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              91.8%; Score 959; DB
ilarity 92.1%; Pred. No. 6.9e
Conservative 5; Mismatches
                                                                                                                                                                                                                                                                                                                                                              LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                  181 LLSCLTVPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LLSCLTTPA 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
tes 174; Conserv
                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 12
S19876
                                                                                                                                                                                                                                         a
                                                                                                                                ઠ
                                                                                                                                                                  셤
                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                              쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
```

```
submitted to the EMBL Data Library, September 1991
A, Description: Sequence analysis of putative structural regions of Hepatitis C Virus isc.
A, Reference number: S18029
A, Accession: S19876
A, Molecule type: genomic RNA
A, Residues: 1-782 < HON>
A, Repertamily: hepatitis C virus genome polyprotein
C, Superfamily: hepatitis C virus genome polyprotein
C, Superfamily: hepatitis C virus genome profeticed < MATI>
F;11917 Product: core protein; Hetatus predicted < MATI>
F;192-1937 Product: envelope protein | #status predicted < MATI>
F;194-7337 Product: nonstructural protein 2 (fragment) #status predicted < MATI>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       genome polyprotein - hepatitis C virus (isolate HC-J4) (fragment)
C;Species: hepatitis C virus
C;Species: hepatitis C virus
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 09-Jul-2004
C;Accession: PCi284
R;Okamoto, H.; Okada, S.; Sugiyama, Y.; Yotsumoto, S.; Tanaka, T.; Yoshizawa, H.; Tsuda, A;Dh. J. Exp. Med. 60, 167-177, 1990
A;Title: The S-terminal sequence of the hepatitis C virus genome.
A;Reference number: PCi284; MUID:91013116; PMID:2170712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Molecule type: genomic RNA
A;Residues: 1-513 -OCKA-
A;Cross-references: UNIRROT:081221; GB:D00832; NID:g221513; PIDN:BAA00706.1; PID:g221514
C;Superfamily: hepatitis C virus genome polyprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 RRQPIPKARQPEGRAWAQPGYPWPLYGNEGLGWAGWLLSPRGSRPSWGPTDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RROPIPKAROPOGRHWAOPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KVIDTLICGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MSTLPKPORKTKRNTNRRPTDVKFPGGGOIVGGVYLLPRRGPRLGVRATRKTSERSOPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MSTNPKPQRKTKRNTNRRPQDVKPPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RRQP1PKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 WRQPIPKARRPEGRAWAQPGYPWPLYGNEGLGWAGWLLSPRGSRPSWGPTDPRRRSRNLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MSTLPKPORKTKRNTNRRPTDVKFPGGGOIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             91.7%; Score 958; DB 2;
91.6%; Pred. No. 3.2e-73;
iive 4; Mismatches 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 957; DB 2;
Pred. No. 2.6e-73;
5; Mismatches 11;
```

```
Best Local Similarity
Matches 172; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Job time : 17 secs
                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                           Query Match
                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C, Accession: PC219
R, Stuyver, L.; Arnhem, W.V.; Wyseur, A.; Maertens, G.
Biochem. Biophys. Res. Commun. 202, 1308-1314, 1994
A, Title: Cloning and phylogenetic analysis of the core, E2, and N83/N84 regions of the h. A, Reference number: PC219; MUID:94338342; PMID:7520237
A, Reference number: PC219
A, Molecule type: mRNA
A, Residues: 1-876 < STUD
A, Cross-references: UNIPROT:Q81242; GB:L29577; GB:L29578; GB:L29579
F, Superfamily: hepatitis C virus genome polyprotein
C, Keywords: glycoprotein
C, Keywords: glycoprotein
F, 1-191, Product: core #status predicted < COB>F, 68-78/Region: variable
F, 192-247/Product: E2/N81 (amino end) #status predicted < ENE>F, 248-411/Region: NS1 (amino end)
F, 319-411/Region: NS1 (amino end)
                                                                                                                                                                                                                                                                                                                                                                                                       Alphanor, in, name No. 1, name
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        polypeptide - hepatitis C virus (type 5a) (fragments)
N;Contains: core protein; El (carboxyl end); E2/NS1 (amino end); NS3 protein; NS4A prote
C;Species: hepatitis C virus
C;Date: 20-Feb-1995 #sequence_revision 20-Feb-1995 #text_change 09-Jul-2004
C;Accession: PC2219
                                                                                      enome polyprotein - hepatitis C virus (isolate JK3) (fragment)
;Contains: core protein; envelope protein 1; nonstructural protein 2; NS1/E2 protein
;Specias: hepatitis C virus
;Variety: isolate JK3
;Date: 30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 RRQPIPKARQPEGRAWAQPGYPWPLYGNEGIGWTGWLLSPRGSRPSWGPTDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 KVIDTLTCGFADLMGYIPLVGAPLGGVARALAHGVRVLEDGVNYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MSTNPKPQRQTKRNTIRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MSTLPKPORKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                          Accession: S19875 - Accession: S19875 - Accession: Kaneko, S.; Masashi, U.; Kobayashi, K.; Murakami, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 782;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ouery Match
91.6%; Score 957; DB 2;
Best Local Similarity 91.6%; Pred. No. 3.9e-73;
Matches 175; Conservative 5; Mismatches 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  F;412-783/Product: NS3 #status predicted <NSR>F;784-837/Product: NS4A #status predicted <NSA>F;838-876/Product: NS4B #status predicted <NSB>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LLSCLTVPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
```

```
F;281,287,294,312,340/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                   ö
                                                                                                                                                                                                                                                                                               RROPIPKAROPOGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                       61 RROPIPKAROPTGRSWGOPGYPWPLYANEGLGWAGWLLSPRGSRPNWGPNDPRRKSRNLG 120
                                                                                                                                                                  9
                                                                                                                                                     1 MSTNPKPQRKTKRNTNRRPQDVKFPGGGQ1VGGVYLLPRRGPRMGVRATRKTSERSQPRG
                                                                                                                             1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                   Gaps
                                                                                   ö
                                         Length 876;
                                                                                   Indela
                                       Score 957; DB 2;
Pred. No. 4.4e-73;
8; Mismatches 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Search completed: July 15, 2005, 09:59:24
                                       91.6%;
ilarity 90.1%;
Conservative 8
                                                                                                                                                                                                                                                                                                                                                                                     LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                          181 LLSCLTVPASA 191
```

0 0 0 0 0 0 0 0 0 0 0 0 0 0

us-09-084-691b-206.rup

```
61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                  hepatitis
hepatitis
hepatitis
hepatitis
hepatitis
hepatitis
                                                                                   hepatitis
hepatitis
hepatitis
hepatitis
hepatitis
                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
MEDLINE=92279243; PubMed=1317578;
Bukh J., Purcell R.H., Miller R.H.;
"Sequence analysis of the 5' noncoding region of hepatitis C virus.";
Proc. Natl. Acad. Sci. U.S.A. 89:4942-4946(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MSTLPKPORKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                              [3]
SEQUENCE FROM N.A.
MEDLINE=93376778; PubMed=8396266;
MEDLINE=93376778; PubMed=8396266;
MAt least 12 genotypes of hepatitis C virus predicted by sequence analysis of the putative El gene of isolates collected worldwide.";
Proc. Natl. Acad. Sci. U.S.A. 90:8234-8238(1993).
HSSP: QBJYS1; ICWX.
                                                                                                                                                                                                                                                                        Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
Q81267
Q6xj47
Q6xj47
Q81274
Q81274
Q68157
Q68157
Q68157
Q68157
Q68157
Q68157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 2; Length 191;
                                                                                                                                                                                                                                                                                                   Indela
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                191
20725 MW; 7A7994DF2F0909C6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0005198; F:structural molecule activity; IEA
InterPro; IPR002522; HCV_capsid.
InterPro: IPR002521; HCV_core.
Pfam; PF01543; HCV_capsid; 1.
                                                                                                                                                                                                                        Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 1045; DB 2;
100.0%; Pred. No. 3e-80;
ive 0; Mismatches 0;
                                                                                                                                                                                                       191 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       core protein.
                                                                                                                                                      ALIGNMENTS
081267
06XJ47
06XJ47
081274
081274
08698
08157
068157
068157
068156
                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                     01-NOV-1996 (TrEMBLrel. 01, C1
01-NOV-1996 (TrEMBLrel. 01, L6
01-JUN-2003 (TrEMBLrel. 24, Le
Polyprotein (Fragment).
  00000000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity lov.
Matches 191; Conservative
 414
3019
3019
1911
4415
4415
191
191
326
                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               191 19
191 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                Hepacivirus.
NCBI_TaxID=11103;
                                                                                                                                                                                           O68115
ID Q68115
AC Q68115,
DT 01-NOV-1996 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Polyprotein.
CHAIN
 NON TER
SEQÜENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                    RESULT 1
 ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                hepatitis
hepatitis
hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              hepatitis
hepatitis
                                                                // Search time 177 Seconds
(without alignments)
552.583 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                            hepatitis
hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hepatitis
hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                             hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                   hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  hepatitis
                                                                                                                                                                                                                                                                                                                     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             hepatiti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           hepatiti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      hepatiti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       hepatiti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hepatiti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hepatit
                                                                                                                         1 MSTLPKPQRKTKRNTNRRPT..........CSFSIFLLALLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                           Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                  081329
092531
092553
P89963
P89965
P899960
081270
0681270
081269
081269
081269
081269
081269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q68153
Q81272
Q81315
P87751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P89965
092532
                                                                                                                                                                                                                                                                                                                                                                                                            068115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P89954
                                                                                                                                                                                             1612378
         5.1.6
Compugen Ltd.
                                                                                                                                                                                           Total number of hits satisfying chosen parameters:
                                                                                                                                                                        1612378 segs, 512079187 residues
                                                                                                                                                                                                                                                                                                                                                            SUMMARIES
         GenCore version
Copyright (c) 1993 - 2005
                                                                                                                                                                                                                                          Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                               protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P89963
P89957
P89960
P89959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q68703
P89962
O93057
Q81269
Q81214
O70635
P89955
                                                                  July 15, 2005, 09:49:58
                                                                                                                                                                                                                                                                                                                                                                                                                      Q68411
P89956
P89958
Q81329
O92531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P89964
P89965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q68153
Q81272
Q81315
P87751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P89954
P89961
                                                                                                                                            BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        092532
                                                                                                                                                                                                                                                                                 UniProt_03:*
1: uniprot_sprot:*
2: uniprot_trembl:*
                                                                                                      US-09-084-691B-206
                                                                                                                                                                                                               length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                Query
Match Length DB
```

Beq Beq

8 8 8

Minimum | Maximum |

Database

Result ġ

Title: Perfect score:

Sequence:

OM protein -

Run on:

Scoring table:

Searched:

9

100255 100224 + 24 1002234 + 24 1002334 100011 + 24 10

```
414 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                            FROM N.A.
                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
Hepacivirus.
NCBI_TaxID=11103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=11103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P89958;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P89958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 4
            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ID DIT OF SERVICE SERV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                          61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRGGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
MEDLINE=97052554; PubMed=8897188;
Bernier L., Willems B., Delage G., Murphy D.G.;
"Identification of numerous hepatitis C virus genotypes in Montreal, Canada.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-MAY-1997 (TrEMBLrel. 03, Created)
01-MAY-1997 (TrEMBLrel. 03, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
10-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Hepatitis C virus.
Viruses; ssRNA-positive-strand viruses, no DNA stage; Flaviviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 99.0%; Score 1035; DB 2; Length 191; Best Local Similarity 99.0%; Pred. No. 2.1e-79; Matches 189; Conservative 0; Mismatches 2; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  191 AA; 20789 MW; F292AB64B56DE30A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 J. Clin. Microbiol. 34:2815-2818(1996).
HSRB1, 0134451; AB440038.1; -.
HSSP, QGUYSL; 1CWX.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0005198; F:structural molecule activity; IEA.
InterPro; IPR002522; HCV capsid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                              191 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF01543; HCV capsid; 1.
Pfam; PF01542; HCV core; 1.
NON TER 191 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-NOV-1996 (TrEMBLrel. 01, 01-NOV-1996 (TrEMBLrel. 01, 01-NOV-2093 (TrEMBLrel. 24, Core protein (Fragment).
                                                                                                                                                                                                                   LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181 LFSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                           181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hepacivirus.
NCBI_TaxID=42182;
                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NON TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                   181
                                    61
                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P89956
                                                                                                                                                                                                                                                                                                                                                                                                                           068411
                                                                                                                                                                                                                                                                                                                                                              RESULT 2
Q68411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 3
P89956
AC P899
DT 01-M
DT 01-O
DT 01-O
DE CORE
OS HEPB
                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                          A PARTY A PART
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                   ઠ
                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠ
                                                                                               ò
```

```
RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 RRQPIPKARQSQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                   HYSP, QBUYSI; LCWX.

R HSSP, QBUYSI; LCWX.

R GO; GO:0019028; C:viral capsid; IEA.

R GO; GO:0019028; C:viral capsid; IEA.

R GO; GO:001915; C:viral capsid; IEA.

R GO; GO:001918; F:structural molecule activity; IEA.

R GO; GO:005198; F:structural molecule activity; IEA.

R InterPro; IPR00252; HCV_core.

R InterPro; IPR002531; HCV_core.

R InterPro; IPR002531; HCV capsid.

R InterPro; IPR002531; HCV_core.

R InterPro; IPR002531; HCV_core.

R Pfam; PF01542; HCV_core; 1.

R Pfam; PF01542; HCV_core; 1.

R Pfam; PF01550; HCV_NS1; 1.

R Pfam; PF01550; HCV_NS1; 1.

R Pfam; PF01560; HCV_NS1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MSTLPKPQRKTKRNTNRRPMDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae; Hepacivirus.
MEDLINE=95062197; PubMed=7972001;
Tokita H., Okamoto H., Tsuda F., Song P., Nakata S., Chosa T.,
Tizuka H., Mishiro S., Miyakawa Y., Mayumi M.;
"Hepatitis C virus variants from Vietnam are classifiable into the seventh, eighth, and ninth major genetic groups.";
Proc. Natl. Acad. Sci. U.S.A. 91:11022-11026(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
MEDLINE-95062197; PubMed=7972001;
MEDLINE-95062197; PubMed=7972001;
Okanco H., Tsuda F., Song P., Nakata S., Chosa T.,
Iizuka H., Mishiro S., Miyakawa Y., Mayumi M.;
"Hepatitis C virus variants from Vietnam are classifiable into the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 414;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3; Indels
                                                                                                                                                                                                                                                                       Okamoto H.;
Submitted (AUG-1996) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7A3BE1710311C017 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98.1%; Score 1025; DB 2; 97.9%; Pred. No. 3.2e-78; iive 1; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               414 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Core, env and part of E2/NS1 (Fragment). Hepatitis C virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-MAY-1997 (TrEMBLrel. 03, Created)
01-MAY-1997 (TrEMBLrel. 03, Last seq
01-JUN-2003 (TrEMBLrel. 24, Last ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        44528 MW;
                                                                                                                                                                                                                                                                                                                                 EMBL; D88469; BAA13618.1;
PIR; PQ0804; PQ0804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 187; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LLSCLTTPTSA 191
```

ö

```
01-NOV-1998 (
01-NOV-1998 (
01-MAR-2004 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Polyprotein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               092531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 6
       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 RRQPIPKARQPTGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 KVIDŢLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MSTLPKPQRKTKRNTNRRPMDVKPPGGGQIVGCVYLLPRRGPRLGVRATRKTSERSQPRG 60
                                                                                                                                                                                    GO; GO: 0015621; C:integral to membrane; IEA.

RG; GO: 0019028; C:viral capsid; IEA.

GO; GO: 0019028; C:viral capsid; IEA.

GO; GO: 0019018; F:structural molecule activity; IEA.

RG; GO: 0019018; F:structural molecule activity; IEA.

RICEPPO; IPR002521; HCV capsid.

RICEPPO; IPR002521; HCV capsid.

RICEPPO; IPR002531; HCV capsid.

RICEPPO; IPR002531; HCV capsid.

RICEPPO; IPR002531; HCV capsid; I.

REAM; PF011843; HCV capsid; I.

REAM; PF011859; HCV capsid; I.

REAM; PF011859; HCV capsid; I.

REAM; PF011859; HCV capsid; I.

REAM; PF011843; HCV capsid; I.

REAM; PF011843; HCV capsid; I.

REAM; PF01184; HCV capsid; I.

REAM; PF01184; HCV capsid; I.

REAM; REAM; REVELOPE protein; Glycoprotein; Nonstructural protein;

ROAL protein; Transmembrane.

WON TER 414 AA; 44973 MW; F3F3CF154372F4FF CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-NOV-1996 (TrEMBLrel. 25, Last annotation update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Core, env and part of E2/NS1 (Fragment)
Hepatitis C virus
Hepatitis C virus
Hepatitis C virus
NITUSES; SSRNA positive-strand viruses, no DNA stage; Flaviviridae;
NCBL_TAXID=11103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.

MEDLINE=95062197; PubMed=7972001;

Tokita H., Okamoto H., Tauda F., Song P., Nakata S., Chosa T.,

Iizuka H., Mishiro S., Miyakawa Y., Mayumi M.;

"Hepatitis C virus variants from Vietnam are classifiable into the seventh, eighth, and ninth major genetic groups.";

Proc. Natl. Acad. Sci. U.S.A. 91:11022-11026(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 1024; DB 2; Length 414;
Pred. No. 3.9e-78;
2; Mismatches 3; Indels (
                                                                                                 Okamoto H.;
Submitted (AUG-1996) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Okamoto H.;
Submitted (AUG-1996) to the EMBL/GenBank/DDBJ databages.
EMBL; D88468; BAA13617.1; -.
PIR; P00804. PQ0804.
HSSP; Q&JYS1; 1CWX.
seventh, eighth, and ninth major genetic groups.";
Proc. Natl. Acad. Sci. U.S.A. 91:11022-11026(1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           414 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                       EMBL; D88471; BAA13620.1; -. HSSP; Q8JYS1; 1CWX.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 97.4%;
Matches 186; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         081329
  1D ACC OCC OCT OCT SERVING SER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
```

```
61 RRQPIPKARQSQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPNWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
GO; GO:0016021; C:integral to membrane; IEA.

RGO; GO:0019028; C:viral capsid; IEA.

RGO; GO:0019028; C:viral capsid; IEA.

RGO; GO:001901; C:viral envelope; IEA.

RGO; GO:0005198; F:structural molecule activity; IEA.

RICEPPO; IPR002522; HCV_capsid.

RICEPPO; IPR002521; HCV_core.

RICEPPO; IPR002519; HCV_core.

REAM; PF01543; HCV_core.

REAM; PF01543; HCV_core.

REAM; PF01550; HCV_NS1; 1.

REAM; PF01550; HCV_NS1; 1.

REAM; PF01560; HCV_NS1; 1.

REAM; PF01560; HCV_NS1; 1.

REAM; PF01560; HCV_NS1; 1.

REAM; RICEPPO; REAMPLANE.

REAM; RICEPPO; REAMPLANE.

REAM; RICEPPO; RICEPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
MEDLINE-98378034; PubMed-9714232;
Tokita H., Okamoto H., Iizuka H., Kishimoto J., Tsuda F., Miyakawa Y.,
Mayumi M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MSTLPKPQRKTKRNTNRRPMDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The entire nucleotide sequences of three hepatitis C virus isolates in genetic groups 7-9 and comparison with those in the other eight genetic groups.";

genetic groups.";

Gen. Virol. 79:1847-1857(1998).

EMBL; D84264; BAA32666.1; -.

PIR; PQ0804; PQ0804.

MSROPS; Q80781; 1CWX.

MSROPS; 229:001; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Heparitis C virus.
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 414;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0005524; F:ATP binding; IEA.
GO; GO:0009026; F:ATP-dependent helicase activity; IEA.
GO; GO:0003723; F:RNA binding; IEA.
GO; GO:0003826; F:serine-type peptidase activity; IEA.
GO; GO:000826; F:serine-type peptidase activity; IEA.
GO; GO:000826; F:serine-type peptidase activity; IEA.
GO; GO:000826; F:serine-type peptidase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 414 AA; 44937 MW; 65355640863B3DCF CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98.0%; Score 1024; DB 2;
98.4%; Pred. No. 3.9e-78;
iive 1; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT; 3016 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (TrEMBLrel. 08, I
(TrEMBLrel. 08, I
(TrEMBLrel. 26, I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity 98.41
Matches 188; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=11103;
```

```
RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 RROPIPKAROPGCRHWAQPGYPWPLYGSEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MSTLPKPQRKJKRNJNRRPMDVKFPGGGQIVGGVYLLPRKGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam; Pf01006; HCV NS4b; 1.
Pfam; PF01001; HCV NS4b; 1.
Pfam; PF01001; HCV NS5a; 1.
Pfam; PF01506; HCV NS5a; 1.
Pfam; PF001508; Vixal RdRP; 1.
PMO0187; SM00487; DEXDC; 1.
PROSITE; PS00190; CYTOCHROME C; UNKNOWN 1.
Coat protein; Envelope protein; Glycoprotein; Nonstructural protein;
Adams A., Chamberlain R.W., Taylor L.A., Davidson F., Lin C.K., Simmonds P., Elliot R.M.; Simmonds P., Elliot R.M.; "Complete coding sequence of hepatitis C virus genotype 6a."; Biochem. Biophys. Res. Commun. 234:393-396(1997).
EMBL; Y12083; CAA72801.1; -... RSP; QBUYS1; ICW.
MEROPS, S29.001; -...
                                                                                                                                                                                       R GO; GO:001902B; C:viral capsid; IEA.

GO; GO:001902B; C:viral capsid; IEA.

GO; GO:001902B; C:viral capsid; IEA.

GO; GO:001902B; C:viral envelope; IEA.

R GO; GO:000802G; F:ATP binding; IEA.

GO; GO:00032B; F:ATP-dependent helicase activity; IEA.

R GO; GO:00032B; F:RNA binding; IEA.

R GO; GO:00032B; F:RNA directed RNA polymerase activity; IEA.

R GO; GO:00082B; F:structural molecule activity; IEA.

R GO; GO:00052B; F:structural molecule activity; IEA.

R GO; GO:00053B; F:structural molecule activity; IEA.

R GO; GO:00053B; P:viral genome replication; IEA.

R GO; GO:0019079; P:viral genome replication; IEA.

R GO; GO:0019079; P:viral genome replication; IEA.

R InterPro; IPR001410; DEAD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97.9%; Score 1023; DB 2; Length 3018; 97.9%; Pred. No. 3.4e-77; ive 2; Mismatches 2; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3018 AA; 329017 MW; 6E67FB3CF6A61AE3 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INCETEC) IRRO04109; PEDTIGASE S29.
INCETPC): IPRO04109; PEDT. Ser Cys.
INCETPC): IPRO02103; PEDT. U39 HCV NS2.
INCETPC): IPRO07095; RNA DOL DS PS.
INCETPC): IPRO07094; RNA DOL DS PS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IPR011545; DEAD/DEAH N.
IPR002522; HCV capsid.
IPR002521; HCV core.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IPR001490; HCV_NS4b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HCV_NS4a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     fam; PF01543; HCV capsid; 1.
fam; PF01542; HCV core; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IPR002519; HCV_env
IPR002531; HCV_NS1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IPR002166; HCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3est Local Similarity 77.7
Matches 187; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IPR000745;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Polyprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro;
InterPro;
InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro;
InterPro;
InterPro;
InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
              $\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac{1}{2}$\frac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 RRQPIPKARQSQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPNWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MSTLPKPORKTKRNTNRRPMDVKFPGGGOIVGGVYLLPRRGPRLGVRATRKTSERSOPRG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MSTLPKPORKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Coat protein; Envelope protein; Glycoprotein; Nonstructural protein;
Polyprotein; Transmembrane.
SEQUENCE 3016 AA; 328032 MW; 4E5CFF96258BCE3B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            no DNA stage; Flaviviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 98.0%; Score 1024; DB 2; Length 3016; Best Local Similarity 98.4%; Pred. No. 2.8e-77; Matches 188; Conservative 1; Mismatches 2; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
STRAIN=euhk2;
MEDLINE=97320481; PubMed=9177282; DOI=10.1006/bbrc.1997.6627;
         P:proteolysis and peptidolysis; IEA.
  GO; GO:0006508; P:proteolysis and peptidolysis; IEAGO; GO:0006350; P:transcription; IEA.
GO; GO:0019079; P:viral genome replication; IEA.
GO; GO:0019087; P:viral genome replication; IEA.
InterPro; IPRO01345; CytC_heme_BS.
InterPro; IPRO01345; CytC_heme_BS.
InterPro; IPRO01345; DEAD/DEAH N.
InterPro; IPRO02522; HCV_copeid.
InterPro; IPRO02521; HCV_core.
InterPro; IPRO02519; HCV_core.
InterPro; IPRO02531; HCV_NS1.
InterPro; IPRO01490; HCV_NS4.
InterPro; IPRO01490; HCV_NS4.
InterPro; IPRO02166; HCV_NS4.
InterPro; IPRO02166; HCV_NS4.
InterPro; IPRO02166; HCV_NS4.
InterPro; IPRO02166; HCV_NS5a.
InterPro; IPRO02166; HCV_NS5a.
InterPro; IPRO0109; Peptidase_S29.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT; 3018 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               UNKNOWN 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Polyprotein.
Hepatitis C virus type 6a.
Hyruses; ssRNA positive-strand viruses,
Hepativirus; Hepatitis C virus type 6.
NCBI_TaxID=31655;
                                                                                                                                                                                                                                                                                                                                                                                      Pept_Ser_Cys.
Pept_U39_HCW_NS2.
RNA_pol_DS_PS.
RNA_pol_PSvir.
RNA_pol_PSvir.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SMART; SM00487; DEXDC; 1.
PROSITE; PS00190; CYTOCHROME_C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PF01539; HCV env; 1.

PF01539; HCV env; 1.

PF01538; HCV NS1; 1.

PF015307; HCV NS3; 1.

PF01006; HCV NS4; 1.

PF01001; HCV NS4; 1.

PF01001506; HCV NS5; 1.

PF01506; HCV NS5; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             interPro; IPR007094; RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR009003;
                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR002518;
                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR007095;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             039927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 7
            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
```

ö

ö

9 9

```
RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KVIDTITCGFADLMGYIPVLGAPLGGVAAALAHGVRVIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MSTLPKPQRKTKRNTNRRPMDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR00252; HCV capsid.
InterPro; IPR00252; HCV capsid.
InterPro; IPR00252; HCV capsid.
InterPro; IPR00251; HCV core.
InterPro; IPR002531; HCV env.
InterPro; IPR002531; HCV NSI.
Pfam; PP01542; HCV core; 1.
Pfam; PP01542; HCV core; 1.
Pfam; PP01542; HCV core; 1.
Pfam; PP01560; HCV NSI; 1.
Coat protein; Envelope protein; Glycoprotein; Nonstructural protein; NoN_TER.
NON_TER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Viruses, ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Hepacivirus.
                        ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
                                                                                                                     SEQUENCE FROM N.A.

BEDILNES-2062197; Pubmed=7972001;

Tokita H., Okamoto H., Tsuda F., Song P., Nakata S., Chosa T.,

Iizuka H., Mishiro S., Miyakawa Y., Mayumi M.;

"Heppatitis C virus variants from Vietnam are classifiable into the seventh, eighth, and ninth major genetic groups.";

Proc. Natl. Acad. Sci. U.S.A. 91:11022-11026(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 414;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4; Indels
                                                                                                                                                                                                                                                                                                                                                                                 to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        414 AA; 44850 MW; 1754DDD583F52414 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019011; C:viral envelope; IEA.
GO; GO:0005198; F:serructural molecule activity; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     97.2%; Score 1016; DB 2;
96.9%; Pred. No. 1.8e-77;
iive 2; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          414 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-MAY-1997 (TrEMBLrel. 03, Created) 01-MAY-1997 (TrEMBLrel. 03, Last sequen 01-07-2003 (TrEMBLrel. 25, Last annota Core, env and part of E2/NS1 (Fragment) Hepatitis C virus.
                                                                                                                                                                                                                                                                                                                                                         Okamoto H.;
Submitted (AUG-1996) to th
EMBL; D88470; BAA13619.1;
HSSP; Q8JYS1; 1CWX.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 185; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
Hepatitis C virus
                                                                     NCBI_TaxID=11103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=11103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P89960
P89960;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 10
ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 RRQPIPKARQSQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121 KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MSTLPKPQRKTKRNTNRRPMDIKFPGGGIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GO; GO:0015021; C:integral to membrane; IEA.

GO; GO:0015021; C:viral capsid; IEA.

GO; GO:0019028; C:viral capsid; IEA.

GO; GO:0019018; C:viral envelope; IEA.

GO: GO:0051918; P:structural molecule activity; IEA.

InterPro; IPR002521; HCV_core.

InterPro; IPR002521; HCV_core.

InterPro; IPR002521; HCV_core.

InterPro; IPR002531; HCV_core.

INTERPO; IPR002531; HCV_core.

INTERPORTED INTERPORTED INTERPORTED INTERPORTED INTERPORTED INTERPORTED INTERPORTED INTERPORTED INTERPORTED INTERPRORTED INTERP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                      Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.

MEDLINE-295062197, PubMed=7972001;

Tokite H., Okamoto H., Tsuda F., Song P., Nakata S., Chosa T.,

Iizuka H., Mishiro S., Miyakawa Y., Mayumi M.;

"Hepatitis C vitus variants from Vietnam are classifiable into the seventh, eighth, and ninth major genetic groups.";

Proc. Natl. Acad. Sci. U.S.A. 91:11022-11026(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 414;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Okamoto H.;
Submitted (AUG-1996) to the EMBL/GenBank/DDBJ databases.
EMBL; D88476; BAA13625.1; -.
HSSP; Q8JYS1; 1CWX.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      44804 MW; 397D0DC5C4BDA20D CRC64;
                                                                                                                                                   Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97.6%; Score 1020; DB 2; 96.9%; Pred. No. 8.4e-78;
                                                                        414 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2; Mismatches
                                                                                                                                                                                                   Core, env and part of E2/NS1 (Fragment).
Hepatitis C virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-MAY-1997 (TrEMBLrel. 03, Created)
01-WAY-1997 (TrEMBLrel. 03, Last sequen
01-UNY-2003 (TrEMBLrel. 24, Last annota
01-JUN-2003 (TrEMBLrel. 24, Last annota
core, env and part of E2/NS1 (Fragment)
                                                                                                                           Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 96.9
Matches 185; Conservative
                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LLSCLTTPTSA 191
                                                                                                                                                01-MAY-1997 (TrEMBLrel.
                                                                                                                                                                           1-MAR-2004 (TrEMBLre]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                           Hepacivirus.
NCBI_TaxID=11103;
                                                                                                                        1-MAY-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                        P89963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P89957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 9
P89957
ID P899
AC P899
DT 01-M
DT 01-M
```

유

ò

유

ઠે

g

ð a

ò

9

Gapa

```
61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        081270
   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 RRQPIPKARQSQGRHWAQPGYPWPLYGNEGCGWAGWLMSPRGSRPHWGPNDPRHKSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MSTLPKPQRKTKRNTNRRPMDVKFPGGGIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60
                                                                                                                                                                                                                                                                                                                                                A GO; GO: 0010021; C: integral to membrane; IEA.

R GO; GO: 0010021; C: viral capsid; IEA.

R GO; GO: 0019028; C: viral capsid; IEA.

R GO; GO: 0019028; C: viral envelope; IEA.

R GO; GO: 0005198; F: structural envelope; IEA.

R InterPro; IPR002521; HCV_capsid.

R InterPro; IPR002521; HCV_capsid.

R InterPro; IPR002519; HCV_capsid.

R InterPro; IPR002519; HCV_capsid.

R InterPro; IPR002519; HCV_capsid.

R Pfam; PF01543; HCV_capsid; 1.

R Pfam; PF01543; HCV_capsid; 1.

R Pfam; PF01543; HCV_capsid; 1.

R Pfam; PF01559; HCV_capsid; 1.

R Pfam; PF01559; HCV_capsid; 1.

R Pfam; PF01559; HCV_capsid; 1.

R Pfam; PF01550; HCV_c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
"Hepatitis C virus variants from Vietnam are classifiable into the seventh, eighth, and ninth major genetic groups.";
Proc. Natl. Acad. Sci. U.S.A. 91:11022-11026(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tokita H., Okamoto H., Tsuda F., Song P., Nakata S., Chosa T., Ilzuka H., Mishiro S., Miyakawa Y., Mayumi M.; Mishiro S., Miyakawa Y., Mayumi M.; Mepatitis C virus variante from Vietnam are classifiable into the seventh, eighth, and ninth major genetic groups."; Proc. Natl. Acad. Sci. U.S.A. 91:11022-11026(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97.2%; Score 1016; DB 2; Length 414; 96.9%; Pred. No. 1.8e-77; ive 1; Mismatches 5; Indels
                                                                                                                                                                             Okamoto H.;
Submitted (AUG-1996) to the EMBL/GenBank/DDBJ databases.
EMBL; D88473; BAA136222.1; -.
PIR; PQ0804; PQ0804.
HSSP; Q8JYS1; 1CWX.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Okamoto H.;
Submitted (AUG-1996) to the EMBL/GenBank/DDBJ databases.
EMBL; F88472; %AA13621.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-WAY-1997 (TrEMBLrel. 03, Created)
01-WAY-1997 (TrEMBLrel. 03, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Core, env and part of E2/NS1 (Fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
MEDLINE=95062197; Pubmed=7972001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 185; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hepacivirus.
NCBI_TaxID=11103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P89959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TARRAN RANGE STATE STATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
```

```
120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 RRQPIPKARQPTGRHWAQPGYPWPLYGNGGGGWAGWLLSPRGSRPNWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
R GO; GO:0015021; C:integral to membrane; IEA.

R GO; GO:0019028; C:viral capsid; IEA.

R GO; GO:0019028; C:viral capsid; IEA.

GO; GO:0019019; C:viral capsid; IEA.

GO; GO:0019019; C:viral capsid; IEA.

R GO; GO:0019019; F:structural molecule activity; IEA.

InterPro; IPR002522; HCV_core.

R InterPro; IPR002519; HCV_env.

R InterPro; IPR002519; HCV_env.

R InterPro; IPR002519; HCV_env.

R Pfam; PF01543; HCV_core; 1.

R Pfam; PF01543; HCV_core; 1.

R Pfam; PF01550; HCV_NS1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              five novel
9c) major
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MSTLPKPQRKTKRNTNRRPMDVKPPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RRQPI PKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MSTLPKPORKTKRNTNRRPTDVKFPGGGOIVGGVYLLPRRGPRLGVRATRKTSERSOPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97.0%; Score 1014; DB 2; Length 414; 96.9%; Pred. No. 2.7e-77; tive 3; Mismatches 3; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    414 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Core, env and part of E2/NS1 (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 185; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=11103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hepacivirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 12
081270
081270
DY 01-NO
DT 01-NO
DT 01-JU
DB CORE,
OX VITUS
COX HEPPAC
COX HEPP
```

180

```
121 KVIDTLTCGFADLMGYIPVVGAPLGGVAAAFAHGVRALEDGINYATGNITGCSFSIFLLA 180
                                                                                                   61 RRQPIPKARQTQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 RRQPIPKARQSQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KVIDTLICGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KVIDTLTCGFADLMGXIPVVGAPLGGVAAAFAHGVRALEDGINFATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MSTLPKPQRKTKRNTYRRPMDVKPPGGGKIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60
         1 MSTLPKPORKTKRNTTRRPMDVKFPGGGOIVGGVYLLPRRGPRLGVRATRKTSERSOPRG
                                                                                                                                                                                         121 KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MSTLPKPORKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Coat protein; Envelope protein; Glycoprotein; Nonstructural protein; Polyprotein; Transmembrane.

NON TER 414 414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Viruses; BBRNA positive-strand viruses, no DNA stage; Flaviviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=95062137; PubMed=7972001;
Tokita H., Okamoto H., Tsuda F., Song P., Nakata S., Chosa T.,
Tizuka H., Mishiro S., Miyakawa Y., Mayumi M.;
Tizuka H., wishiro S., Miyakawa Y., Mayumi M.;
"Hepatitis C virus variants from Vietnam are classifiable into the seventh, eighth, and ninth major genetic groups.";
Proc. Natl. Acad. Sci. U.S.A. 91:11022-11026(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 414;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Okamoto H.; Submitted (AUG-1996) to the EMBL/GenBank/DDBJ databases. EMBL; D88475; BAA13624.1; -. HSSP; Q8JYS1; 1CWX.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:0019031; C:viral envelope; IEA.
InterPro; IPR002522; HCV_capsid.
InterPro; IPR002521; HCV_core.
InterPro; IPR002531; HCV_env.
InterPro; IPR002531; H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      414 AA; 44751 MW; 4BBA61438D11E3C6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 96.6%; Score 1009; DB 2; Best Local Similarity 96.3%; Pred. No. 7.1e-77; Matches 184; Conservative 3; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         414 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Core, env and part of E2/NS1 (Fragment).
Hepatitis C virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (TrEMBLrel. 03, (TrEMBLrel. 03,
                                                                                                                                                                                                                                                                                                                      LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                            181 LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-JUN-2003 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=11103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-MAY-1997
01-MAY-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hepacivirus
                                                                                                                                                                                                                                                                                                                   181
                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                         d
                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                         RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 RRQPIPKARHQTGRSWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KVIDTLTCGFADLMGYIPVVGAPLGGVAAALAHGVRAIEDGINYATGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Maertens G.;
"Hepatitis C virus genotyping by means of 5'-UR/core line probe assays and molecular analysis of untypeable samples.";
Virus Res. 38:137-157(1995).
EMBL; L38339; AAC42193.1; -.
HSSP; Q8JYS1; ICWX.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
MEDLINE=96118171; PubMed=8578855; DOI=10.1016/0168-1702(95)00052-R;
Stuyver L., Wyseur A., van Arnhem W., Lunel F., Laurent-Puig P.,
Pawlotsky J.-M., Kleter B., Bassit L., Nkengasong J., van Doorn L.-J.,
                                                                                                                                                                                                                                                                                                               1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                      1 MSTLPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MSTLPKPQRKTKRNTNRRPTDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                         Gaps
Pfam, PF01560, HCV NS1; 1.

Coat protein, Envelope protein, Glycoprotein, Nonstructural protein, Polyprotein, Tranamembrane.

NON TER 414 414 SEQÜENCE 414 AA, 44994 MW, 8C1E123FC61D89FC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            no DNA stage; Flaviviridae;
                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                         Length 414;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 319;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF01543; HCV capsid; 1.
Pfam; PF01542; HCV core; 1.
Pfam; PF01539; HCV env; 1.
Coat protein; Envelope protein; Glycoprotein; Polyprotein;
                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   319 AA; 34545 MW; DC1D0EA52ED64A8F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:0005198; F:structural molecule activity; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'n
                                                                                                                                                                                   Query Match

96.7%; Score 1011; DB 2;
Best Local Similarity 97.4%; Pred. No. 4.8e-77;
Matches 186; Conservative 0; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            96.6%; Score 1009; DB 2; 96.3%; Pred. No. 5.4e-77; iive 2; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            319 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         core protein.
El protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Viruses; ssRNA positive-strand viruses,
Hepacivirus; Hepatitis C virus type 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR002522; HCV capsid.
InterPro; IPR002521; HCV core.
InterPro; IPR002519; HCV env.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               virus type 6a.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 96.3
Matches 184; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Core protein (Fragment)
Hepatitis C virus type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      >319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=31655;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NON TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 13
Q68703
      STAKE
                                                                                                                                                                                                                                                                                                                                                                      원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCOORDING TO THE PLANT OF THE PACE OF THE
                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
```

181 LLSCLTTPASA 191

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 RRQPIPKARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 RRQPIPKARQPTGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPNWGPNDPRRRSRNLG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.

MEDLINE=97060095; Pubmed=8904416;

MEDLINE=97060095; Pubmed=8904416;

Doi H., Apichartpiyakul C. C. Obba K., Mizokami M., Hotta H.;

Doi H., Apichartpiyakul C. C. Obba K., Mizokami M., Hotta H.;

Doi H., Apichartpiyakul C. C. Obba K., Mizokami M., Hotta H.;

T. "Hepatitis C virus (HCV) subtypes prevalence in Chiang Mai, Thailand, and identification of novel subtypes of HCV major types 6.";

J. Clin. Microbiol. 34:569-574(1996).

R. BMBL; D63946; BAA09976.1;

R. BRBL; D63946; C. Viral capsid; IEA.

GO; GO:0019028; F. Structural molecule activity; IEA.

R. Oc. 10005212; HCV capsid.

R. InterPro; IPR002521; HCV capsid.

R. Fam; PF01541; HCV capsid.

R. Pfm; PF01542; HCV capsid.

R. Pfm; PF01542; HCV capsid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                     093057; Q68747;
01-NOV-1998 (TrEMBLrel. 08, Created)
01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Polyprotein (Fragment).
Hepatitis C virus.
Viruses; 88RNA positive-strand viruses, no DNA stage; Plaviviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 96.4%; Score 1007; DB 2; Length 191; Best Local Similarity 95.3%; Pred. No. 4.8e-77; Matches 182; Conservative 5; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      191 191
191 AA; 20727 MW; 411C1C851ADA2DB5 CRC64;
                                                                                        191 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         core protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Search completed: July 15, 2005, 09:58:34 Job time : 178 secs
                                                                                          PRT;
181 LLSCLTTPASA 191
                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            >191
                                                                                                                                                                                                                   Hepacivirus.
NCBI_TaxID=11103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Polyprotein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NON TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                           RESULT 15
                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
```

```
Abr55581 Amino aci
Abr5589 Amino aci
Abr5589 Amino aci
Abr5580 Amino aci
Abr5580 Amino aci
Abr5580 Amino aci
Adr7781 Hepatitis
Adr19093 HCV core
Adh19097 Hepatitis
Adi34996 HPpatitis
Adi28495 Synthetic
Adl28845 Synthetic
Adl28869 Synthetic
Adl28869 Synthetic
Amino aci
Amino aci
Amino aci
Amino aci
Amino aci
Amino aci
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hepatitis C Virus immunogenic polypeptide contg. a T-cell stimulating epitope - from core, El, E2 and NS3 regions, useful in production of vaccines, therapeutic agents, etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    was
of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A series of overlapping peptides (including the present sequence) synthesised based on sequences in the core, B1 and B2/NS1 regions heptitis C virus. The peptides were used as antigens in lymphoproliferative assays to identify the main T-cell epitopes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                            Hepatitis C virus; HCV; immunogen; core region; nucleocapsid; immunodominant; T cell epitope; vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7.9%; Score 15; DB 2; Length 15; 00.0%; Pred. No. 2.6e-06; ve 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                       Hepatitis C virus peptide CORE 2 (residues 5-19)
                                                                                                                                                                                                                                    ALIGNMENTS
           ABR55581
ABR55587
ABR55587
ABR55587
ABR55577
ABR55580
ADH19092
ADH19097
ADH19097
ADH19097
ADH19097
ADH19097
ADH2098
ADH258586
ADL25885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 4; Page 51; 105pp; English
                                                                                                                                                                                                                                                                                         Æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity 100.0%; P
                                                                                                                                                                                                                                                                                         AAR84495 standard; peptide; 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94WO-EP003555.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                93EP-00402718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PKPORKTKRNTNRRP 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Leroux-Roels G, Deleys R,
 (INNO-) INNOGENETICS NV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1995-193822/25.
                                                                                                                                                                                                                                                                                                                                                                                                           Hepatitis C virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-OCT-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9512677-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                04-NOV-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       11-MAY-1995
 AAR84495;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Loca
Matches
                                                                                                                                                                                                                                                                                AAR84495
                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Aar64495 Hepatitie
Aar67634 Epitope o
Aaw685416 Hepatitie
Aag62640 Hepatitie
Aaj03729 Hepatitie
Aaj03729 Hepatitie
Aaj0368 Hepatitie
Aaj0368 Hepatitie
Aaj03468 Hepatitie
Aaj03468 Hepatitie
Aaj03468 Hepatitie
Aaj03468 Hepatitie
Aaj03468 Hepatitie
Aaj03507 Hepatitie
Aaj03507 Hepatitie
Aaj03681 Hepatitie
Aaj03781 Hepatitie
Aaj03781 Hepatitie
Aaj03781 Hepatitie
Aaj03781 Hepatitie
Aaj03781 Hepatitie
Aaj03458 Hepatitie
Aaj03458 Hepatitie
Aaj03458 Hepatitie
Aaj03458 Hepatitie
Aaj03458 Hepatitie
Aaj03988 Hepatitie
Aaj03988 Hepatitie
Aaj03988 Hepatitie
Aaj03988 Hepatitie
Aaj03988 Hepatitie
                                                                                 (without alignments)
461.695 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                     .........CSFSIFLLALLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Description
                                                                      July 15, 2005, 09:59:09; Search time 160 Seconds
                                                                                                                                                                                                                                     632537
        GenCore version 5.1.6
(c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                  of hits satisfying chosen parameters:
                                                                                                                                                                                         2105692 segs, 386760381 residues
                                                   model
                                                                                                                                                                                                                                                                                        Post-processing: Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGG2639
AAGG2640
AAJ03568
AAJ03568
AAJ03152
AAJ03168
AAJ03189
AAJ03363
AAJ03263
AAJ03263
AAJ03263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAJ03458
AAJ03984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAJ03384
AAM50818
                                                                                                                                                          OLIGO
Gapop 60.0 , Gapext 60.0
                                                                                                              US-09-084-691B-206
191
1 MSTLPKPQRKTKRNTNRRPT.
                                                 protein search, using sw
                                                                                                                                                                                                                                                                                                                      geneseqp1980s:*
geneseqp2000s:*
geneseqp2000s:*
geneseqp2001s:*
geneseqp2001s:*
geneseqp2003ss:*
geneseqp2003bs:*
                                                                                                                                                                                                                                                                                                             Geneseq_16Dec04:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                   Copyright
                                                                                                                                                                                                                                                         seq length: 0 seq length: 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query
Match
                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Perfect score:
                                                                                                                                                          Scoring table:
                                                                                                                                                                                                                                    Total number
                                                                                                                                                                                                                                                         Minimum DB
Maximum DB
                                                 OM protein
                                                                                                                                                                                                                                                                                                             Database :
                                                                                                                                                                                                             Word size
                                                                                                                                      Seguence:
                                                                                                                                                                                         Searched:
                                                                      Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Result
No.
```

DR1; DR7;

අ

```
AAW85284-451 represent helper T-cell class II peptides, which can bind to the human leucocyte antigens (HLA) DR4w4, DR1 and DR7. The peptides are used in the course of the invention. The specification describes peptides peptides, that induce a cytotoxic T lymphocyte (CTL) response, and T-helper peptides, that are used together to generate a CTL response for the treatment or prevention of viral, fungal, bacterial or parasaitic malaria) or cancer (e.g. renal or cervical carcinoma, lymphoma, prostate cancer or condyloma acuminatum). Helper T-cell peptides may be used alone to induce a helper T cell response, e.g. in cases of autoimmune disease, allograft rejection, allergy, Lyme disease, hepatitis, post-streptococcal endocarditis, glomerulonephritis and food hypersensitivity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Composition containing peptide that induces cytotoxic T lymphocyte response, and helper peptide - can bind to human leucocyte antigen alleles, used to treat or prevent cancers, parasitic infections and
                                                                                                                                                            Helper T-cell peptide; human leucocyte antigen; HLA; DR4w4; cytotoxic T lymphocyte; CTL; hepatitis; autoimmune disease; acquired immune deficiency syndrome; malaria; cancer; allograft rejection; allergy; Lyme disease; hepatitis; post-streptococcal endocarditis; glomerulonephritis;
                                                                                                                          Helper T-cell class II peptide derived from core protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7.9%; Score 15; DB 2; Lf
.00.0%; Pred. No. 2.6e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page 42; 51pp; English.
  Ź
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAG62639 standard; peptide; 15 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.08; F1
  AAW85416 standard; peptide; 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Southwood
                                                                                                                                                                                                                                                                                                                                                                                                                                                              98WO-US001373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97US-0036713P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             97US-0037432P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VYLLPRRGPRLGVRA 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  34 VYLLPRRGPRLGVRA 48
                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11-SEP-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15; Conservative
                                                                                                                                                                                                                                                                       food hypersensitivity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (EPIM-) EPIMMUNE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sidney J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1998-427679/36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              autoimmune disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                   Synthetic.
Hepatitis C virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-JAN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23-JAN-1997;
                                                                                                                                                                                                                                                                                                                                                                                WO9832456-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07-FEB-1997;
                                                                                16-FEB-1999
                                                                                                                                                                                                                                                                                                                                                                                                                         30-JUL-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAG62639;
                                         AAW85416;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sette A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAG62639
  SXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAR67634 is designated M2aE and is located at postions 39-53 of the structural protein (AAR67617) of the Non-A Non-B (NANB) hepatitis virus encoded by a partial cDNA to genomic RNA sequence. Regions of the polypeptide were studied for suitability as an epicope. The positive ratios of the peptide epitope to the plasma of donors, who had been judged as positive with a reagent of the second generation, i.e., a second generational anti hepatitis virus antibody detection reagent, were determined. This peptide had a positive ratio (%) of 62.3. The novel epitopes are effective in the diagnosis of NANB hepatitis. The nucleotide sequences (see AAC7811-19) were isolated from the plasma of donors in Japan with high s-GTP levels, and were found to be different from previously reported NANB hepatitis viruses. The DNA can be used as a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             reagent for detecting the NANB hepatitis viral gene. The polypeptides can be used as reagents for detecting anti-NANB hepatitis antibodies or as a NANB hepatitis viral vaccine. (Updated on 25-MAR-2003 to correct PN field.) (Updated on 27-AUG-2003 to correct OS field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New non-A non-B hepatitis virus sub-type - used to develop prods. for detection, diagnosis, prevention and treatment of non-A non-B hepatitis.
                                                                                                                                                                                                                                                                                                          Non-A Non-B hepatitis virus; structural region; cDNA to genomic RNA; detection; reagent; anti-Non-A Non-B hepatitis virus antibody; vaccine; antigen; epitope; diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Iwasaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ..
0
                                                                                                                                                                                                                                                                         Epitope of Non-A Non-B hepatitis virus structural protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7.9%; Score 15; DB 2; Length 15; 100.0%; Pred. No. 2.6e-06; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hosoda T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sawada T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 3; Page 39; 59pp; English.
                                                                                                      AAR67634 standard; protein; 15 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tohmatsu J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               94EP-00108256.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        93JP-00126709.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 RRGPRLGVRATRKTS 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                39 RRGPRLGVRATRKTS 53
                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15; Conservative
1 PKPQRKTKRNTNRRP
                                                                                                                                                                                         (revised)
                                                                                                                                                                                                                                                                                                                                                                                                      Non-A.
non-B hepatitis virus.
                                                                                                                                                                                                               revised
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (EISA ) EISAI CO LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Obara T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1995-015655/03.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27-MAY-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28-MAY-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              02-MAR-1994;
                                                                                                                                                                                         27-AUG-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                              EP628572-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14-DEC-1994
                                                                                                                                                                                                                                18-AUG-1995
                                                                                                                                                                                                               25-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Aoyama M,
                                                                                                                                               AAR67634;
```

Arima T;

ö

Gaps

ö

Hepatitis C virus core protein epitope #1.

Matches

ठे

RESULT 3 AAW85416

```
Novel immunogenic complex, useful in vaccine compositions for therapeutic and prophylactic treatment of disease conditions resulting from hepatitis C virus infection, has charged organic carrier and charged antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention describes a composition comprising a prepared hepatitis C virus (HCV) epitope such as those given in AAJ00010-AAJ04121. These are derived from HCV HLA-binding metifs. They are useful in vaccines for the prevention and treatment of HCV infection in humans. The present sequence is an epitope used in the disclosure of the invention
                                                                                                                                                         The present invention relates to an immunogenic complex, comprising an electrostatically associated charged organic carrier and a charged antigen, where the antigen is a protein from the hepatitis C virus (HCV). This can be used in a vaccine of elicit an immune response against HCV, and therefore prevent infection by the virus. The present sequence is a HCV core protein derived epitope described in the exemplification of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hepatitis C virus; HCV; epitope; vaccine; immunogen; HLA-binding motif;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        composition useful as a vaccines against hepatitis C virus
                                                                                                                                                                                                                                                                                                    7.9%; Score 15; DB 4; Length 15; 00.0%; Pred. No. 2.6e-06; Ve 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7.9%; Score 15; DB 4; Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Southwood S, Livingston BD,
Kubo RT, Grey HM;
                Paliard X;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Page 182; 214pp; English.
                                                                                                                                Example 4; Page 46; 67pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ź
                                                                                                                                                                                                                                                                                                        7.5.; Pre-
100.0%; Pre-
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hepatitis C virus epitope #3720.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAJ03729 standard; peptide; 15
                Houghton M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19-JUL-2000; 2000WO-US019774.
                                                                                                                                                                                                                                                                                                                                                              86 YGNEGCGWAGWLLSP 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99US-00357737
                                                                                                                                                                                                                                                                                                                                                                                1 YGNEGCGWAGWLLSP 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (EPIM-) EPIMMUNE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sidney J,
Celis E,
                                           WPI; 2001-367618/38.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2001-308046/32
                                                                                                                                                                                                                                                                                                                    Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hepatitis C virus.
                Cox J,
                                                                                                                                                                                                                                                                           Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200121189-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        02-JUL-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-MAR-2001
                                                                                                                                                                                                                                                                                                                                   15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sette A,
Baker DM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 antiviral
                                                                                                                                                                                                                                                 invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAJ03729;
                Drane D,
                                                                                                                                                                                                                                                                                                       Query Match.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A new
                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 6
AAJ03729
 ઠે
                                                                                                                                                                                                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ô
                                                                                                                                                                                                                                                                                                                 vvel immunogenic complex, useful in vaccine compositions for therapeutic id prophylactic treatment of disease conditions resulting from hepatitis virus infection, has charged organic carrier and charged antigen.
                                                                                                                                                                                                                                                                                                                                                                                                    The present invention relates to an immunogenic complex, comprising an electrostatically associated charged organic carrier and a charged antigen, where the antigen is a protein from the hepatitis C virus (HCV). This can be used in a vaccine to elicit an immune response against HCV, and therefore prevent infection by the virus. The present sequence is a HCV core protein derived epitope described in the exemplification of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
          Hepatitis C virus, HCV, vaccine, charged antigen, charged carrier, electrostatic association, core protein, epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hepatitis C virus; HCV; vaccine; charged antigen; charged carrier; electrostatic association; core protein; epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 4; Le:
2.6e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hepatitis C virus core protein epitope. #2
                                                                                                                                                                                                                                                          Paliard X;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7.9%; Score 15;
100.0%; Pred. No.
tive 0; Mismatch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ź
                                                                                                                                                                                                                                                                                                                                                                          Example 4; Page 46; 67pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAG62640 standard; peptide; 15
                                                                                                                                                                                                                                                          Cox J, Houghton M,
                                                                                                                                            17-NOV-2000; 2000WO-AU001410
                                                                                                                                                                     19-NOV-1999; 99US-0166652P
11-AUG-2000; 2000US-0224362P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19-NOV-1999; 99US-0166652P.
11-AUG-2000; 2000US-0224362P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17-NOV-2000; 2000WO-AU001410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 KVIDTLTCGFADLMG 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 KVIDTLTCGFADLMG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                                                CSL LTD.
CHIRON CORP.
                                                                                                                                                                                                                                                                                     WPI; 2001-367618/38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (CSLC-) CSL LTD.
(CHIR ) CHIRON CORP.
                                                       Hepatitis C virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hepatitis C virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 15 AA;
                                                                                   WO200137869-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200137869-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11-SEP-2001
                                                                                                               31-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            invention
                                                                                                                                                                                                                                                         Drane D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAG62640;
                                                                                                                                                                                                               (CSLC-)
                                                                                                                                                                                                                                                                                                                   Novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAG62640
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
```

ä

ö

Gaps

.; 0

```
The present invention describes a composition comprising a prepared hepatitis C virus (HCV) epitope such as those given in AAJ00010-AAJ04121. These are derived from HCV HLA-binding motifs. They are useful in vaccines for the prevention and treatment of HCV infection in humans. The present sequence is an epitope used in the disclosure of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present invention describes a composition comprising a prepared hepatitis C virus (HCV) epitope such as those given in AAJ00010-AAJ04121.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hepatitis C virus; HCV; epitope; vaccine; immunogen; HLA-binding motif;
                                                                                                                                                                                    A new composition useful as a vaccines against hepatitis C virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      composition useful as a vaccines against hepatitis C virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               쫎
                                                                                                                            Chesnut R;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chesnut
                                                                                                                                                                                                                                                                                                                             Length 15
                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BD,
                                                                                                                            Livingston BD,
                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                            Score 15; DB 4; Le
Pred. No. 2.6e-06;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Livingston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Southwood S, Livin
Kubo RT, Grey HM;
                                                                                                                            Southwood S, Livi
Kubo RT, Grey HM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; Page 177; 214pp; English.
                                                                                                                                                                                                            Disclosure; Page 175; 214pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAJ03352 standard; peptide; 15 AA.
                                                                                                                                                                                                                                                                                                                           7.9%; Sco
100.0%; Pr
tive 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hepatitis C virus epitope #3343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19-JUL-2000; 2000WO-US019774.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99US-00357737
                                                         19-JUL-2000; 2000WO-US019774
                                                                               99US-00357737
                                                                                                                                                                                                                                                                                                                                                                          119 LGKVIDTLTCGFADL 133
                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (EPIM-) EPIMMUNE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sidney J,
Celis E,
                                                                                                      (EPIM-) EPIMMUNE INC
                                                                                                                            Sidney J,
Celis E,
                                                                                                                                                              WPI; 2001-308046/32.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2001-308046/32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hepatitis C virus.
                                                                                                                                                                                                                                                                                                      Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200121189-A1.
          WO200121189-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19-JUL-1999;
                                                                               19-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      02-JUL-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29-MAR-2001
                                  29-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sette A, S
Baker DM,
                                                                                                                             Sette A,
Baker DM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  antiviral
                                                                                                                                                                                                                                                                                                                                                                                                Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAJ03352;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         new
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Baker
                                                                                                                                                                                                                                                                                                                                                                                                                                             AAJ03352
ID AAJC
                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
 ò
                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;
            ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention describes a composition comprising a prepared hepatitis C virus (HCV) epitope such as those given in AAJ00010-AAJ04121. These are derived from HCV HLA-binding motifs. They are useful in vaccines for the prevention and treatment of HCV infection in humans. The present sequence is an epitope used in the disclosure of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hepatitis C virus; HCV; epitope; vaccine; immunogen; HLA-binding motif;
                                                                                                                                                                                                             Hepatitis C virus; HCV; epitope; vaccine; immunogen; HLA-binding motif;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                              A new composition useful as a vaccines against hepatitis C virus.
            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                      Я,
                                                                                                                                                                                                                                                                                                                                                                                      Chesnut
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7.9%; Score 15; DB 4; Length 15;
100.0%; Pred. No. 2.6e-06;
tive 0; Mismatches 0; Indels
          Indels
                                                                                                                                                                                                                                                                                                                                                                                     S, Livingston BD, Grey HM;
Pred. No. 2.6e-06;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Page 179; 214pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAJ03200 standard; peptide; 15 AA.
                                                                                                                  AAJ03568 standard; peptide; 15 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hepatitis C virus epitope #3191.
                                                                                                                                                                                                                                                                                                                                                                                     Southwood S
Kubo RT, G
                                                                                                                                                                                     Hepatitis C virus epitope #3559
          .
0
                                                                                                                                                                                                                                                                                                                  19-JUL-2000; 2000WO-US019774
 100.0%;
                                                                                                                                                                                                                                                                                                                                         99US-00357737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     90 GCGWAGWLLSPRGSR 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GCGWAGWLLSPRGSR 15
                                  57
                                                1 RLGVRATRKTSERSQ 15
                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 100.0
Matches 15; Conservative
          15; Conservative
                                  43 RLGVRATRKTSERSQ
                                                                                                                                                                                                                                                                                                                                                                (EPIM-) EPIMMUNE INC
                                                                                                                                                                                                                                                                                                                                                                                     Sidney J,
Celis E,
                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2001-308046/32
 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hepatitis Č virus.
                                                                                                                                                                                                                                              Hepatitis C virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 15 AA;
                                                                                                                                                                                                                                                                     WO200121189-A1
                                                                                                                                                                                                                                                                                                                                         19-JUL-1999;
                                                                                                                                                              02-JUL-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  02-JUL-2001
                                                                                                                                                                                                                                                                                            29-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           antiviral.
                                                                                                                                                                                                                                                                                                                                                                                      Ω,
M
                                                                                                                                       AAJ03568;
                                                                                                                                                                                                                         antiviral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAJ03200;
Best Local
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                      Sette /
                                                                                                      AAJ03568
ID AAJ0
                                                                                          RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 8
                                                                                                                             셤
                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                  ò
```

Gaps

888888

```
The present invention describes a composition comprising a prepared hepatitis C virus (HcV) epitope such as those given in AAJ00010-AAJ04121. These are derived from HCV HLA-binding motifs. They are useful in vaccines for the prevention and treatment of HCV infection in humans. The present sequence is an epitope used in the disclosure of the invention
                                                   Hepatitis C virus; HCV; epitope; vaccine; immunogen; HLA-binding motif;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hepatitis C virus; HCV; epitope; vaccine; immunogen; HLA-binding motif;
                                                                                                                                                                                                                                                                                                                                                                  A new composition useful as a vaccines against hepatitis C virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chesnut R;
                                                                                                                                                                                                                                                                                      Chesnut
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7.9%; Score 15; DB 4; Length 15; 100.0%; Pred. No. 2.6e-06; Ive 0; Mismatches 0; Indel8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Southwood S, Livingston BD,
Kubo RT, Grey HM;
                                                                                                                                                                                                                                                                                     Southwood S, Livingston BD, Kubo RT, Grey HM;
                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; Page 174; 214pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAJ03983 standard; peptide; 15 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hepatitis C virus epitope #3974.
                      epitope #3037.
                                                                                                                                                                                          19-JUL-2000; 2000WO-US019774.
                                                                                                                                                                                                                         99US-00357737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   171 GCSFSIFLLALLSCL 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19-JUL-2000; 2000WO-US019774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99US-00357737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15; Conservative
                                                                                                                                                                                                                                                        (EPIM-) EPIMMUNE INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (EPIM-) EPIMMUNE INC
                                                                                                                                                                                                                                                                                     Sidney J,
Celis E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sidney J,
Celis E,
                                                                                                                                                                                                                                                                                                                                   WPI; 2001-308046/32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2001-308046/32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity
Matches 15; Conserv
                      Hepatitis C virus
                                                                                                  Hepatitis C virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hepatitis C virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 15 AA;
                                                                                                                             WO200121189-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200121189-A1.
                                                                                                                                                                                                                         19-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         02-JUL-2001
                                                                                                                                                             29-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29-MAR-2001.
                                                                                                                                                                                                                                                                                      Sette A, S
Baker DM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sette A, S
Baker DM,
                                                                      antiviral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        antiviral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAJ03983;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 12
AAJ03983
      요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present invention describes a composition comprising a prepared hepatitis C virus (HCV) epitope such as those given in AAJ00010-AAJ04121. These are derived from HCV HLA-binding-motifs. They are useful in vaccines for the prevention and treatment of HCV infection in humans. The present sequence is an epitope used in the disclosure of the invention
                                                                                                                                                                                                                                                                                                                                                                                             Hepatitis C virus; HCV; epitope; vaccine; immunogen; HLA-binding motif; antiviral.
These are derived from HCV HLA-binding motifs. They are useful in vaccines for the prevention and treatment of HCV infection in humans. T present sequence is an epitope used in the disclosure of the invention
                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A new composition useful as a vaccines against hepatitis C virus.
                                                                                                                                <u>.</u>
ن
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chesnut R;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7.9%; Score 15; DB 4; Length 15; 100.0%; Pred. No. 2.6e-06; ive 0; Mismatches 0; Indels
                                                                                                Length 15;
                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Southwood S, Livingston BD,
Kubo RT, Grey HM;
                                                                                                DB 4; Le
                                                                                                                            Mismatches
                                                                                           7.9%; Score 15;
100.0%; Pred. No.
tive 0; Mismatch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure; Page 178; 214pp; English.
                                                                                                                                                                                                                                                                    AAJ03468 standard; peptide; 15 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAJ03046 standard; peptide; 15 AA.
                                                                                                                                                                                                                                                                                                                                                                Hepatitis C virus epitope #3459.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19-JUL-2000; 2000WO-US019774.
                                                                                                                                                            171 GCSFSIFLLALLSCL 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               123 IDTLICGFADLMGYI 137
                                                                                                                                                                                       1 GCSFSIFLLALLSCL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02-JUL-2001 (first entry)
                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (EPIM-) EPIMMUNE INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sidney J,
Celis E,
                                                                                          Query Match
Best Local Similarity
Matches 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2001-308046/32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity
Matches 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                          Hepatitis C virus.
                                                                  Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200121189-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19-JUL-1999;
                                                                                                                                                                                                                                                                                                                                02-JUL-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A,
DM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAJ03046;
                                                                                                                                                                                                                                                                                                   AAJ03468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
```

Sette

RESULT

셤 ठ

ö

Gaps

ô

я;

RESULT 10

ઠે 유 AAJ03468

```
The present invention describes a composition comprising a prepared hepatitis C virus (HCV) epitope such as those given in AAJ00010-AAJ04121. These are derived from HCV HLA-binding motifs. They are useful in vaccines for the prevention and treatment of HCV infection in humans. The present sequence is an epitope used in the disclosure of the invention
                                                                                                                                             Hepatitis C virus; HCV; epitope; vaccine; immunogen; HLA-binding motif;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hepatitis C virus; HCV; epitope; vaccine; immunogen; HLA-binding motif;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A new composition useful as a vaccines against hepatitis C virus
                                                                                                                                                                                                                                                                                                                                                                                       Chesnut
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 15; DB 4; Length 15;
Pred. No. 2.6e-06;
0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                     S, Livingston BD, Grey HM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Page 175; 214pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ź
                  AAJ03151 standard; peptide; 15 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7.9%; SCOL.
100.0%; Pre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hepatitis C virus epitope #3498.
                                                                                                              Hepatitis C virus epitope #3142
                                                                                                                                                                                                                                                                                                                                                                                       Southwood S
Kubo RT, (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAJ03507 standard; peptide; 15
                                                                                                                                                                                                                                                                                          19-JUL-2000; 2000WO-US019774.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19-JUL-2000; 2000WO-US019774.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99US-00357737
                                                                                                                                                                                                                                                                                                                         99US-00357737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VYLLPRRGPRLGVRA 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 7.9
Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                34 VYLLPRRGPRLGVRA
                                                                                                                                                                                                                                                                                                                                                                                       Sidney J,
Celis E,
                                                                                                                                                                                                                                                                                                                                                         (EPIM-) EPIMMUNE INC
                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2001-308046/32
                                                                                                                                                                                            Hepatitis C virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hepatitis C virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 15 AA;
                                                                                                                                                                                                                            WO200121189-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200121189-A1
                                                                                                                                                                                                                                                                                                                         19-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          02-JUL-2001
                                                                                02-JUL-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29-MAR-2001
                                                                                                                                                                                                                                                            29-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                       Sette A,
Baker DM,
                                                AAJ03151;
                                                                                                                                                                 antiviral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         antiviral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAJ03507;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAJ03507
   AAJ0315.
                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                             The present invention describes a composition comprising a prepared hepatitis C virus (HCV) epitope such as those given in AAJ00010-AAJ04121. These are derived from HCV HLA-binding motifs. They are useful in vaccines for the prevention and treatment of HCV infection in humans. The present sequence is an epitope used in the disclosure of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention describes a composition comprising a prepared hepatitis C virus (HCV) epitope such as those given in AAJ00010-AAJ04121. These are derived from HCV HLA-binding motifs. They are useful in vaccines for the prevention and treatment of HCV infection in humans. The present sequence is an epitope used in the disclosure of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hepatitis C virus; HCV; epitope; vaccine; immunogen; HLA-binding motif;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A new composition useful as a vaccines against hepatitis C virus
new composition useful as a vaccines against hepatitis C virus
                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chesnut
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7.9%; Score 15; DB 4; Length 15; 100.0%; Pred. No. 2.6e-06; ive 0; Mismatches 0; Indels
                                                                                                                                                                                              Length 15;
                                                                                                                                                                                                                            Indels
                                                                                                                                                                                         DB 4; Leng
. 2.6e-06;
ches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S, Livingston BD, Grey HM;
                                                                                                                                                                                            Query Match 7.9%; Score 15; DB Best Local Similarity 100.0%; Pred. No. 2.6 Matches 15; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure; Page 177; 214pp; English.
                                 Example 5; Page 198; 214pp; English
                                                                                                                                                                                                                                                                                                                                                                        AAJ03360 standard; peptide; 15 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hepatitis C virus epitope #3351.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Southwood &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19-JUL-2000; 2000WO-US019774
                                                                                                                                                                                                                                                            119 LGKVIDTLTCGFADL 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99US-00357737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120 GKVIDTLTCGFADLM 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GKVIDTLTCGFADLM 15
                                                                                                                                                                                                                                                                                1 LGKVIDTLTCGFADL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (EPIM-) EPIMMUNE INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sidney J,
Celis E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2001-308046/32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hepatitis C virus.
                                                                                                                                                              Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200121189-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                        02-JUL-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        antiviral
                                                                                                                                                                                                                                                                                                                                                                                                        AAJ03360;
```

Sette Baker

g

ò

ö

Gaps

ö

ä

RESULT 13 AAJ03360

g

à

```
A new composition useful as a vaccines against hepatitis C virus.
                                                                    Disclosure, Page 178; 214pp; English.
      (EPIM-) EPIMMUNE INC.
                   Sette A, Sidney J,
Baker DM, Celis E,
                                        WPI; 2001-308046/32.
```

Southwood S, Livingston BD, Chesnut R; Kubo RT, Grey HM;

The present invention describes a composition comprising a prepared hepatitis C virus (HCV) epitope such as those given in AAJ00010-AAJ04121. These are derived from HCV HLA-binding motifs. They are useful in vaccines for the prevention and treatment of HCV infection in humans. The present sequence is an epitope used in the disclosure of the invention Sequence 15 AA;

119 LGKVIDTLTCGFADL 133

ò 셤

Query Match 7.9%; Score 15; DB 4; Length 15; Best Local Similarity 100.0%; Pred. No. 2.6e-06; Matches 15; Conservative 0; Mismatches 0; Indels

ö

Gарв

; 0

Search completed: July 15, 2005, 10:23:34 Job time : 161 Becs

This Page Blank (Uspto)

Fri

```
7.9%; Score 15; DB 4; Length 15; 100.0%; Pred. No. 2.2e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: linear
MOLECULE TYPE: peptide
SEQUENCE DESCRIPTION: SEQ ID NO: 243:
US-09-009-953-243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 15 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO: 243:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
\omega
                                                                                                                                                                                                                       US-09-009-953-243
1139, Ap
12, Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3, Appli
3, Appli
3, Appli
3, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 243, App
Sequence 1, Appli
                                                           July 15, 2005, 10:18:06; Search time 42 Seconds (without alignments) 339.476 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                           Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                              US-09-084-691B-206
191
1 MSTLPKPQRKTKRNTNRRPT......CSFSIFLIALLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                             Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Seguence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                  Issued Patents, AA:*

(cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
(cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
(cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
(cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
(cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
(cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
(cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
       5.1.6
Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-790-497A-134
US-09-576-824A-134
US-08-974-685-1
US-08-604-365-15
US-09-689-678-15
US-09-009-93-180
US-08-102-738-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -08-159-339A-1139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .09-311-784A-284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -09-941-611-3
-09-790-497A-39
                                                                                                                                                                                                                                                                                                                                                                                                                              -09-009-953-243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -08-737-085A-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3-09-532-106-12
3-09-275-265-3
3-09-839-666-12
                                                                                                                                                                                                   Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-102-738-23
US-08-102-738-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -08-466-975A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -08-391-671A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -08-102-738-17
-08-604-365-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -08-501-195-3
                                                                                                                                                                513545 seqs, 74649064 residues
                                                                                                                                                                                                                                                                                                                                                                                SUMMARIES
       GenCore version
Copyright (c) 1993 - 2005
                                                                                                                                                                                                                                                 Post-processing: Listing first 45 summaries
                                           protein search, using sw model
                                                                                                                                     OLIGO
Gapop 60.0 , Gapext 60.0
                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                     Minimum DB seq length: 0 Maximum DB seq length: 15
                                                                                                                                                                                                                                                                                                                                                                                                 Query
                                                                                                                                                                                                                                                                                                        5 :: ::
                                                                                                                                                                                  0
                                                                                               Title:
Perfect score:
                                                                                                                                     Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                            Score
                                                                                                                                                                                                                                                                                                                                                                                                                               ı
                                                                                                                                                                                  Word size :
                                           OM protein
                                                                                                                                                                                                                                                                    Database :
                                                                                                                    Sequence:
                                                                                                                                                                Searched:
                                                             Run on:
                                                                                                                                                                                                                                                                                                                                                                                                   Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š.
```

```
39, Appl
39, Appl
39, Appl
52, Appl
131, App
262, App
                                                                                                                                                                                                      Appli
, Appl
                                                                                                                                         Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                   Sequence Sequence 1
                                                                                                      Sequence
                                                                                                                                                                                                                                           Sequence
Sequence
                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                               Sequence
                                                              Sequence
                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Sette, Alessandro
TITLE OF INVENTION: Identification of Broadly
Reactive DR Restricted Epitopes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
ADDRESSE: Townsend and Townsend and Crew LLP
STREET: Two Embarcadero Center, Eighth Floor
CITY: San Francisco
STATE: CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPTRY: USA
ZIP: 94111-3834
COMPUTER READABLE PORCH:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/009,953
FILING DATE: 21-Jan-1998
CLASSIFICATION DATA:
APPLICATION DATA:
FILING DATE: 23-JAN-1997
APPLICATION NUMBER: US 60/036,713
FILING DATE: 23-JAN-1997
APPLICATION NUMBER: US 60/037,432
FILING DATE: 07-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Weber, Ellen Lauver
REGIGTRATION NUMBER: 32,762
REFRENCE/DOCKET NUMBER: 018623-011520US
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-576-0200
US-09-689-678-19
US-00-681-701-5
US-08-146-028-39
US-08-112-206-39
US-09-5112-206-39
US-09-5112-206-39
US-09-5112-206-39
US-09-5112-30-39
US-09-111-7844-52
US-09-111-7844-52
US-09-111-7844-131
US-09-111-7844-131
US-09-111-7844-131
US-09-111-7844-131
US-09-111-7844-131
US-09-111-7844-131
US-09-111-78-111
US-08-102-738-21
US-08-09-576-824A-514
US-09-689-678-117
US-09-689-678-117
US-09-689-678-117
US-08-1146-028-1182
                                                                                                                                                                                                                                                                                                                                                                                                        ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 243, Application US/09009953; Patent No. 6413517; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: 415-576-0300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES: 274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ELEX: <Unknown>
```

```
à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1, Application US/08974690C

Sequence 1, Application US/08974690C

Bactert No. 6613333

GENERAL INPORMATION:

APPLICANT: LEGOUX-ROBLS, Geert

APPLICANT: DELEYS, Robert

APPLICANT: MARSTERS, Geert

TITLE OF INVENTION: UNRUS

FILE REFERENCE: 2551-94

CURRENT PILING DATE: 1997-11-19

FRIOR PELICATION NUMBER: US/08/974,690C

CURRENT FILING DATE: 1997-11-19

PRIOR FILING DATE: 1994-10-28

PRIOR FILING DATE: 1993-11-04

NUMBER OF SEQ ID NOS: 286

SOFTWARE: Patentin version 3.1

LEMOTH. 10 10

LEMOTH. 10 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
       ö
                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: DELEVEY, Robert
APPLICANT: DELEVEY, Robert
TITLE OF INVENTION: INMUNODMINANT HUMAN T CELL EPITOPES OF HEPATITIS C
TITLE OF INVENTION: VIRUS
TITLE OF INVENTION: VIRUS
FILE REFERENCE: 2752-18
FURRENT APPLICATION NUMBER: US/08/635,886C
CURRENT APPLICATION NUMBER: PCT/EP94/03555
PRIOR PILING DATE: 1994-10-28
PRIOR PILING DATE: 1994-10-28
PRIOR PILING DATE: 1993-11-04
NUMBER OF SEQ ID NOS: 286
SEQ ID NOS: 286
SEG ID NO 1
SEG ID NO 1
SERVICE SERVICE SECOND NOTE SECOND NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
       Gaps
       ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7.9%; Score 15; DB 4; Length 15; 100.0%; Pred. No. 2.2e-07; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 15;
       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
       ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7.9%; Score 15; DB 4; L. 100.0%; Pred. No. 2.2e-07;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                            US-08-635-886C-1
; Sequence 1, Application US/08635886C
; Patent No. 6555114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Pre-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ilarity 100.0%; P
Conservative 0;
                                                                 34 UYLLPRRGPRLGVRA 48
                                                                                                                                  1 VYLLPRRGPRLGVRA 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5 PKPQRKTKRNTNRRP 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 PKPORKTKRNTNRRP 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5 PKPQRKTKRNTNRRP 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PKPQRKTKRNTNRRP 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
ORGANISM: hepatitis C virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; ORGANISM: hepatitis C virus
US-08-635-886C-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity 100.
Matches 15; Conservative
15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
nes 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-974-690C-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-974-690C-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
Matches
                                                                    ò
                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
```

```
JUNEARLY INFORMATION: PROCESS FOR THE DETERMINATION OF PEPTIDES CORRESPONDING
JULIA OF INVENTION: PROCESS FOR THE DETERMINATION OF PEPTIDES CORRESPONDING
JULIA OF INVENTION: TO IMMUNOLOGICALLY IMPORTANT EPITOPES AND THEIR USE IN
JULIA OF INVENTION: A PROCESS FOR PREPARING THEM AND COMPOSITIONS
JULIA OF INVENTION: BIOTINVILATED PEPTIDES CORRESPONDING TO IMMUNOLOGICALLY IMPORTANT
JULIA OF INVENTION: EPITOPES, A PROCESS FOR PREPARING THEM AND COMPOSITIONS
JULIA OF INVENTION: CONTAINING THEM
FILE REPRENCE: 2752-16
CURRENT APPLICATION NUMBER: US/09/790,497A
CURRENT APPLICATION NUMBER: US/09/76,824
PRIOR PILING DATE: 1996-09-30
PRIOR PADLICATION NUMBER: 09/146,028
PRIOR PILING DATE: 1996-09-30
PRIOR PRIOR PAPLICATION NUMBER: EP 92400598.6
PRIOR PILING DATE: 1993-03-08
PRIOR PILING DATE: 1993-03-08
PRIOR PILING DATE: 1992-03-08
PRIOR SEQID NOS: 600
SOFTWARE: PATENTIN VOIC: 2.1
SEQID NO 134
LEAGURE OF SEQID NOS: 600
SERVIN NUMBER: PATENTIN VOIC: 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ROBERT PROCESS FOR THE DETERMINATION OF PEPTIDES CORRESPONDING TO INMUNOLOGICALLY IMPORTANT EPITOPES AND THEIR USE IN A PROCESS FOR DETERMINATION OF ANTIBODIES OF BOTINYLATED PEPTIDES CORRESPONDING TO IMMUNOLOGICALLY IMPORTANT EPITOPES, A PROCESS FOR PREPARING THEM AND COMPOSITIONS CONTAINING THEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ő
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 15; DB 4; Lo
Pred. No. 2.2e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
APPLICANT: De Leys, Robert
TITLE OF INVENTION: PROCESS FOR THE DETERMINAT
TITLE OF INVENTION: TO INMUNOLOICALLY IMPORT
TITLE OF INVENTION: BIOTINVLATED PEPTIDES COR;
TITLE OF INVENTION: BIOTINVLATED PEPTIDES COR;
TITLE OF INVENTION: BIOTINVLATED PEPTIDES COR;
TITLE OF INVENTION: CONTAINING THEM
TITLE OF INVENTION: CONTAINING THEM
CURRENT APPLICATION NUMBER: US/09/576,824A
CURRENT FILING DATE: 1996-09-30
PRIOR FILING DATE: 1996-09-30
PRIOR APPLICATION NUMBER: O9/146,028
PRIOR APPLICATION NUMBER: PCT/EP93/00517
PRIOR APPLICATION NUMBER: PCT/EP93/00517
PRIOR PILING DATE: 1993-10-08
PRIOR FILING DATE: 1993-0-08
PRIOR FILING DATE: 1992-03-06
PRIOR FILING DATE: 1992-03-06
PRIOR FILING DATE: 1992-03-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 134, Application US/09576824A Patent No. 6667387
                      Sequence 134, Application US/09790497A
Patent No. 6649735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7.9%; Scc...
100.0%; Pre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5 PKPQRKTKRNTNRRP 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 PKPORKTKRNTNRRP 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Hepatitis C virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: PRT ORGANISM: Hepatitis C virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 7.9
Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PatentIn Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-790-497A-134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-576-824A-134
-09-790-497A-134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: Pat
SEQ ID NO 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGIH: 15
```

à

8

```
Sequence 15, Application US/09689678
Patent No. 6592871
GENERAL INFORMATION:
APPLICANT: Seidel, Christoph; Ehrich-Weinreich,
Gertraud; Bayer, Hubert; Wienhues, Ursula; Jung,
Guncher-Gerhard; Inlenfeldt, Hans Georg
TITLE OF INVENTION: HCV Peptide Antigens and Methods for
the Determination of HCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
      HCV Peptide Antigens and Methods for
the Determination of HCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7.3%; Score 14; DB 3; Length 15,
                                                                                                                                                                                                                                                                                ZIP: 10022
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 5.25 inch, 360 kb storage
COMPUTER: IBM PS/2
OPERATING SYSTEM: PC-DOS
SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/604,365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/977,398
FILING DATE: 11-MARCH-1993
APPLICATION NUMBER: PCT/EP92/01468
FILING DATE: 30-JUNE-1992
PRIOR APPLICATION NUMBER: DE 41 22 160.5
FILING DATE: 40-JULY-1991
PRIOR APPLICATION NUMBER: DE 41 41 304.0
FILING DATE: 14-DEC-1991
PRIOR APPLICATION NUMBER: DE 42 09 216.9
FILING APPLICATION NUMBER: 34.266
RESERENGS/DOCKET NUMBER: BOER 1010
TELECOMMUNICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES: 32
CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & Lynch
STREET: 805 Third Avenue
CITY: New York City
STATE: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7.3°; Pre-
TITLE OF INVENTION: HCV Pept.
TITLE OF INVENTION: the Dete.
NUMBER OF SEQUENCES: 32
CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & Lynch
STRET: 805 Third Avenue
CITY: New York
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO: 3
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5 PKPQRKTKRNTNRR 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 PKPORKTKRNTNRR 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15 amino acida
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: linear
MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 14; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 8
US-09-689-678-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-604-365-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROPHYLACTIC AND
                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HEPATITIS C VIRUS STRUCTURAL PROTEINS, PROPH THERAPEUTIC COMPOSITIONS CONTAINING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY: U.S.A.

ZIPE: VIRGUIA

COUNTRY: U.S.A.

ZIP: 22201-4714

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

COMPUTER: IBM P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: LEROUIX-ROELS, GEERT
DELEYS, ROBERT
MAERTENS, GEERT
TITLE OF INVENTION: IMMUNODOMINANT HUMAN T CELL EPITOPES OF
                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 15, Application US/08604365
Patent No. 6183949
GENERAL INFORMATION:
APPLICANT: Seidel, Christoph; Ehrich-Weinreich,
APPLICANT: Gertraud; Bayer, Hubert; Wienhues, Ursula; Jung,
APPLICANT: G nther-Gerhard; Inhlenfeldt, Hans Georg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7.9%; Score 15; DB 4; Length 15; 100.0%; Pred. No. 2.2e-07; tive 0; Mismatches 0; Indels
                                                                    7.9%; Score 15; DB 4; Length 15; 100.0%; Pred. No. 2.2e-07;
                                                                                                                                 0; Indels
                                                                                    100.0%; Preu. ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES: 181
CORRESPONDENCE ADDRESS:
ADDRESSES: NIXON & VANDERHYE P.C.
STREET: 1100 NORTH GLEBE ROAD
CITY: ARLINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; STRANDEDNESS: single; TOPOLOGY: linear; MOLECULE TYPE: peptide; SEQUENCE DESCRIPTION: SEQ ID NO: 1: US-08-974-685-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 816-4000
                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 1, Application US/08974685
Patent No. 6689368
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: (703) 816-4100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 15 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                               5 PKPQRKTKRNTNRRP 19
                                                                                                                                                                                                                                  1 PKPQRKTKRNTNRRP 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5 PKPQRKTKRNTNRRP 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 PKPQRKTKRNTNRRP 15
                                                                Query Match
Best Local Similarity 100.C
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 7.9
Best Local Similarity 100.
Matches 15; Conservative
      US-09-576-824A-134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 7
US-08-604-365-15
                                                                                                                                                                                                                                                                                                                                                                                 US-08-974-685-1
```

ö

ઠે 셤

```
SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/102,738
FILING DATE: 6-AUG-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6.8%; Scc.
100.0%; Pre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-102-738-22
; Sequence 22, Application US/08102738
; Patent No. 5674676
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: Felfe & Lynch
STREET: 805 Third Avenue
CITY: New York City
STATE: New York
COUNTRY: USA
    PRIOR APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 163 NYATGNLPGCSFS 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (212) 838-3884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 13; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 5.25 inch, 360 kb storage
COMPUTER: IBM ES/2
OPERATING SYSTEM: PC-DOS
SOFTWARE: Wordperfect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 7.3%; Score 14; DB 4; Length 15; Best Local Similarity 100.0%; Pred. No. 2e-06; Matches 14; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 180, Application US/09009953
Patent No. 6413517
GENERAL INFORMATION:
APPLICANT: Sette, Alessandro
TITLE OF INVENTION: Identification of Broadly
Reactive DR Restricted Epitopes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESONDENCE ADDRESS:
CORRESONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew LLP
STREET: Two Embarcadero Center, Eighth Floor
CITY: San Francisco
STATE: CA
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM COmpatible
OPERATING SYSTEM: DOS
SOFTWARE: FRAUESQ for Windows Version 2.0
                                                                                                                              CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/689,678
FILING DATE: 13-OCT-2000
CLASSIFICATION DATA:

APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US/08/604,365
FILING DATE: 11-MARCH-1993
APPLICATION NUMBER: 07/977,398
FILING DATE: 11-MARCH-1993
APPLICATION NUMBER: PCT/EP92/01468
FILING DATE: 10-MARER: PCT/EP92/01468
FILING DATE: 10-MARCH-1992
APPLICATION NUMBER: DE 41 21 160.5
FILING DATE: 14-DEC-1991
APPLICATION NUMBER: DE 41 41 304.0
FILING DATE: 14-DEC-1991
APPLICATION NUMBER: DE 42 09 216.9
FILING DATE: 1-MARCH-1992
ATTORNEY/AGENT INFORMATION:
NAME: TREFERENCE/DOCKET NUMBER: BOER 1010
REFERENCE/DOCKET NUMBER: BOER 1010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/009,953
FILING DATE: 21-Jan-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION: SEQ ID NO: 15:
US-09-689-678-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: (212) 838-3884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INFORMATION FOR SEQ ID NO: 15
SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 PKPORKTKRNTNRR 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-009-953-180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
```

```
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Seidel, Christoph; Wienhues, Ursula-Henrike;
APPLICANT: Bayer, Hubert; Jung, Guenther-Gerhard; Ihlenfeldt, Hans-APPLICANT: Bayer, Hubert; Jung, Guenther-Gerhard; Ihlenfeldt, Hans-TITLE OF INVENTION: HOV Peptide Antigens And Method Of TITLE OF INVENTION: Determining HCV NUMBER OF SEQUENCES: 28
CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & Lynch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indele
                                                                                                                                           ATIONALL FORDER TREASURED.

NAME: Weber, Ellen Lauver
REGISTRATION NUMBER: 32,762
REPERBENGE/DOCKET WUMBER: 018623-011520US
TELEPHONE: 415-576-0200
TELEPAX: 415-576-0300
SEQUENCE CHARACTERISTICS: 415-576-0300
TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 5.25 inch, 360 kb storage COMPUTER: IBM PS/2 OPERATING SYSTEM: PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 13; DB 4; Le
Pred. No. 1.7e-05;
APPLICATION NUMBER: US 60/036,713
PILING DATE: 23-JAN-1997
APPLICATION NUMBER: US 60/037,432
PILING DATE: 07-FEB-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear

NOLECULE TYPE: peptide

SEQUENCE DESCRIPTION: SEQ ID NO: 180:
US-09-009-953-180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 6-AUG-1937
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE 42 6 093.0
FILING DATE: 7-AUG-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE 42 40 980.2
FILING DATE: 5-DEC-1992
ATTORNEY/AEDRI INFORMATION:
NAME: Teal, Christine H.
REGISTRATION NUMBER: 34,266
REFISENCE/POCKET NUMBER: 34,266
REFISENCE/POCKET NUMBER: BOER 1019
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 689-9200
```

```
1 VGGVYLLPRRGP 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-102-738-24
  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 23, Application US/08102738
Patent No. 5674676
GENERAL INFORMATION:
APPLICANT: Seidel, Christoph; Wienhues, Ursula-Henrike;
APPLICANT: Seled, Christoph; Wienther-Gerhard; Ihlenfeldt, Hans-APPLICANT: Georg
TITLE OF INVENTION: HCV Peptide Antigens And Method Of
TITLE OF INVENTION: Deermining HCV
NUMBER OF SEQUENCES: 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gapa
                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                            Length 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 6.3%; Score 12; DB 1; Length 12; Best Local Similarity 100.0%; Pred. No. 0.00013; Matches 12; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STATE: New York
COUNTRY: USA
ZIP: 10022
COMPUTER READALE FORM:
MEDIUM TYPE: Diskette, 5.25 inch, 360 kb storage
COMPUTER: IBM PS/2
                                                                                                                                                                                            DB 1; Le
                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PS/2
COMPUTER: IBM PS/2
SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/102,738
FILING DATE: 6-AUG-1993
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE 42 6 093.0
FILING DATE: 7-AUG-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE 42 40 980.2
FILING DATE: 7-BC-1992
ATTORNEY/AGENT INFORMATION:
NAME: TSai, Christine H.
REGISTRATION NUMBER: BOER 1019
FELECOMMUNICATION INFORMATION:
TELEFONDE: (212) 688-9200
                                                                                                                                                                                               6.3%; Score 12;
                                                                                                                                                                                        Query Match 6.3%;
Best Local Similarity 100.0%;
Matches 12; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3SSEE: Felfe & Lynch
3T: 805 Third Avenue
New York City
1: New York
                                          12 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12 amino acids
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                28 GQIVGGVYLLPR 39
                                                                                                                                                                                                                                                                                                                      1 GOIVGGVYLLPR 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & L)
                                                                                       single
                                                                                                     ; TOPOLOGY: linear; MOLECULE TYPE: cDNA US-08-102-738-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: CDNA
                                                              TYPE: amino acid
STRANDEDNESS: si
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: amino acid
STRANDEDNESS: 81)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                             US-08-102-738-23
                                        LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET:
                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                        ద
```

31 VGGVYLLPRRGP 42

ò

```
ö
RESULT 12
US-08-102-738-24
is Sequence 24, Application US/08102738
is Patent No. 5674676
is GENERAL INFORMATION:
APPLICANT: Seidel, Christoph; Wienhues, Ursula-Henrike;
APPLICANT: Bayer, Hubert; Jung, Guenther-Gerhard; Inlenfeldt, Hans-
APPLICANT: Georg
TITLE OF INVENTION: Determining HCV
TITLE OF INVENTION: Determining HCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 12; DB 1; Lengtn 12;
Pred. No. 0.00013;
Tilmetrhes 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                          ZIP: 10022
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 5.25 inch, 360 kb storage
COMPUTER: IBM PS/2
OPERATING SYSTEM: PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-737-085A-12
Sequence 12, Application US/08737085A
Patent No. 5869232
GENERAL INFORMATION:
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF SEQUENCES:
TUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
ADDRESSEE: DARBY & DARBY PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 6.3%; Score 12; DB Best Local Similarity 100.0%; Pred. No. 0.0 Matches 12; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/102,738
FILING DATE: 6-AUG-1993
CLASSIFICATION NUMBER: US 6 093.0
FILING DATE: 7-AUG-1993
RPICR APPLICATION DATA:
APPLICATION NUMBER: DE 42 6 093.0
FILING DATE: 7-AUG-1992
PRIOR APPLICATION NUMBER: BE 40 980.2
FILING DATE: 5-DEC-1992
ATTORNEY/AGENT INFORMATION:
NAME: TRAAL, CHISELING H.
REGISTRATION NUMBER: 34,266
REFERENCE/DOCKET NUMBER: 34,266
REFERENCE/DOCKET NUMBER: BOER 1019
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE: DARBY & DARBY PC
STREET: 805 Third Avenue
                                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 28
CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & Lynch
STREET: 805 Third Avenue
CITY: New York City
STATE: New York
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE: (212) 688-9200
TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO: 24:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
LENGTH: 12 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      34 VYLLPRRGPRLG 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 VYLLPRRGPRLG 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
```

```
RESULT 15
US-08-466-975A-3
; Sequence 3, Application US/08466975A
; Patent No. 5910404
; GENERAL INFORMATION:
; APPLICANT: DELEYS, ROBERT J
APPLICANT: POLLET, DIRK
; APPLICANT: VAN HEUVERSWUN, HUGO
; TITLE OF INVENTION: SYNTHETIC ANTIGENS FOR THE DETECTION OF
; TITLE OF INVENTION: ANTIBODIES TO HEPATITIS C VIRUS
; NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 5.8%; Score 11; DB 2; Length 11;
Best Local Similarity 100.0%; Pred. No. 0.0011;
Matches 11; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/NS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/466,975A

FILING DATE:

CLASSIFICATION:

PRIOR APPLICATION:

APPLICATION NUMBER: US/08/391,671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US 07/920,286
FILING DATE: 14-0CT-1992
PRICK APPLICATION NUMBER: US 07/920,286
FILING DATE: 13-DCT-1991
FILING DATE: 13-DEC-1991
FRIOR APPLICATION DATA: APPLICATION DATA: APPLICATION DATA: APPLICATION ATA: APPLICATION PATA: APPLICATION NUMBER: EP 90124241.2
FILING DATE: 14-DEC-1990
ATTORNEY/AGENT INFORMATION:
NAME: SADOFF, B.J.
REGISTRATION NUMBER: 36,663
                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: linear
MOLECULE TYPE: peptide
ORIGINAL SOURCE:
ORGANISM: NON-A,NON-B hepatitis virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE: NIXON & VANDERHYE P.C.
STREET: 1100 NORTH GLEBE ROAD
CLASSIFICATION: 436
PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP 6-183904
AFILING DATE: July 12, 1994
ATTORNEY/AGENT INFORMATION:
NAME:
                                                                                                                                                 REGISTRATION NUMBER:
REFERENCE/DOCKET NUMBER:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                        ..
ლ
                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 11 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 PGGGQIVGGVY 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25 PGGGQIVGGVY 35
                                                                                                                                                                                                                                                                                                                                       TYPE: amino acid STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: ARLINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                        TELEPHONE:
                                                                                                                                                                                                                                                TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-501-195-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
APPLICANT: KASHIWAKUMA, Tomiko
APPLICANT: KASHIWAKUMA, Tomiko
APPLICANT: HASBGAWA, ABGI, Shintearo
APPLICANT: HASBGAWA, ABGI,
APPLICANT: HASBGAWA, Tadahiro
APPLICANT: MORI, Tadahiro
APPLICANT: MORI, HIOVUKI
ITILE OF INVENTION: HWHONASSAY OF NON-A,NON-B
TITLE OF INVENTION: HEPATITIS VIRUS-RELATED ANTIGENS, MONOCLONAL
ITILE OF INVENTION: PRODUCING THE ANTIBODIES
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 5.8%; Score 11; DB 2; Length 11; Best Local Similarity 100.0%; Pred. No. 0.0011; Matches 11; Conservative 0; Mismatches 0; Indels
                                                                        ZIP: 10022
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastESEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/737,085A
FILING DATE: 27-DEC-1996
CLASSIFICATION DATA:
APPLICATION NUMBER: EFLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Green, Reza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET: Yamada Bldg., 1-14
CITY: Shinjuku 1-chome, Shinjuku-ku
CITY: Shinjuku 1-chome, Shinjuku-ku
CITY: Shinjuku 1-chome, Shinjuku-ku
COUNTY: Japan
ZIP: 160
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: Apple Macintosh
OPERATING SYSTEM: Macintosh SE, Text file
SOFTWARE: Microsoft Word Version #4.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/501,195
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                             ATJUMENTALIAN REZA
NAME: Green, Reza
REGISTRATION NUMBER: 38,475
REPERENCE/DOCKET NUMBER: 3846/0C569
TELEPHONE: 212-527-7659
TELEPHONE: 212-753-6237
TELERAX: 212-753-6237
INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
LENGTH: 11 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KAWAGUTI & PARTNERS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 3, Application US/08501195
Patent No. 5871904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8 QRKTKRNTNRR 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 QRKTKRNTNRR 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
         New York
New York
                                                       USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-737-085A-12
         CITY: New
STATE: Ne
COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 14
US-08-501-195-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             엄
```

Gaps

ö

Length 11;

```
| REFERENCE/DOCKET NUMBER: 1487-5 | TELECROMINICATION INFORMATION: | TELECROMINICATION INFORMATION: | TELECROMINICATION INFORMATION: | TELECROMINICATION | TELECROMINICATION | TELECROMINICATION | TELECROMICATION | TELECROMICATION
```

Search completed: July 15, 2005, 10:28:09 Job time: 43 secs

This Page Blank (Uspio)

Sequence 14, Appl Sequence 7, Appli Sequence 7, Appli

Sequence 15, 7 Sequence 180,

Sequence

Sequence Sequence Sequence

Sequence Sequence Sequence

```
Sequence 12, Appli
Sequence 3, Appli
Sequence 31, Appli
Sequence 12, Appl
Sequence 284, Appl
Sequence 212, Appl
Sequence 312, Appl
Sequence 312, Appl
Sequence 318, Appl
Sequence 318, Appl
Sequence 318, Appl
Sequence 318, Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 178, 8
Sequence 180, 8
Sequence 217, 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: EPITMUNE, Inc.
APPLICANT: Sette, Alessandro
APPLICANT: Sette, Alessandro
APPLICANT: Sidney, John
APPLICANT: Sidney, John
TITLE OF INVENTION: IDENTIFICATION OF BROADLY REACTIVE DR
TITLE OF INVENTION: IDENTIFICED EPITOPES
FILE REFRENCE: 39963-20016.01
CURRENT APPLICATION NUMBER: US/10/103,395
CURRENT APPLICATION NUMBER: US/09/009,953
PRIOR FILING DATE: 1998-01-23
PRIOR FILING DATE: 1998-01-23
PRIOR APPLICATION NUMBER: US 60/036,713
PRIOR APPLICATION NUMBER: US 60/036,713
PRIOR APPLICATION NUMBER: US 60/036,713
PRIOR PRING DATE: 1997-02-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indele
14 US-10-268-569-10
15 US-10-268-569-18
15 US-10-621-65-13
16 US-10-621-675-134
17 US-10-621-68-513
18 US-10-268-56-3
19 US-10-268-56-3
14 US-10-268-56-3
14 US-10-268-56-14
14 US-10-268-56-17
15 US-10-268-56-17
16 US-10-268-56-17
17 US-09-894-018-232
18 US-03-371-56-284
28 US-10-371-56-284
29 US-10-371-56-284
29 US-10-371-56-284
20 US-10-371-540-19
20 US-09-894-018-217
20 US-09-894-018-217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7.9%; Score 15; DB 13; I 100.0%; Pred. No. 2.8e-06; tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS: 274
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-103-395-243

Sequence 243, Application US/10103395

; Publication No. US20020160019A1

; GENERAL INFORMATION:
        44574744774466664445444464454444644544444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 7.9
Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
) ORGANISM: Homo sapiens
US-10-103-395-243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 243, App
Sequence 4, Appli
Sequence 5, Appli
Sequence 6, Appli
Sequence 10, Appli
Sequence 10, Appli
Sequence 18, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
                                                                                                                                                July 15, 2005, 10:26:41; Search time 161 Seconds (without alignments) 458.986 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 4,
Sequence 5,
Sequence 6,
Sequence 6,
                                                                                                                                                                                                                                                                                  MSTLPKPQRKTKRNTNRRPT......CSFSIFLLALLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Published Applications AA:*

1: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*
2: /cgn2_6/ptodata/1/pubpaa/PCT_MBW_PUB.pep:*
4: /cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*
5: /cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*
5: /cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*
6: /cgn2_6/ptodata/1/pubpaa/US08_NEW_PUB.pep:*
7: /cgn2_6/ptodata/1/pubpaa/US08_NEW_PUB.pep:*
8: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
9: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
11: /cgn2_6/ptodata/1/pubpaa/US09B_PUBCOMB.pep:*
11: /cgn2_6/ptodata/1/pubpaa/US09B_PUBCOMB.pep:*
12: /cgn2_6/ptodata/1/pubpaa/US09B_PUBCOMB.pep:*
13: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
14: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
15: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
16: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
17: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
18: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
19: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
21: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
22: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
22: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
                          5.1.6
Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-103-395-243
US-10-268-561-4
US-10-268-561-5
US-10-268-561-6
US-10-268-561-10
US-10-268-561-18
US-10-268-561-18
US-10-268-569-4
US-10-268-569-5
US-10-268-569-5
US-10-268-569-5
US-10-268-569-5
US-10-268-569-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                           1729182 seqs, 386893608 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SUMMARIES
                        GenCore version
Copyright (c) 1993 - 2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Post-processing: Listing first 45 summaries
                                                                                                           protein search, using sw model
                                                                                                                                                                                                                                                                                                                            OLIGO
Gapop 60.0 , Gapext 60.0
                                                                                                                                                                                                                                       US-09-084-691B-206
191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 %
Query
Match Length D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Minimum DB seq length: 0 Maximum DB seq length: 15
```

0

Word size :

Searched:

Database :

Maximum

Title: Perfect score:

Sequence:

ı

OM protein

Run on:

Scoring table:

Sequence 19, Sequence 13, Sequence 13, ö

Gapa

ö

Score

Result Š

```
PRIOR APPLICATION NUMBER: US 60/337453
PRIOR FILING DATE: 2001-11-05
NUMBER OF SEQ ID NOS: 19
SOFTWARE: Patentin version 3.1
SEQ ID NO 6
LENGTH: 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              86 YGNEGCGWAGWLLSP 100
                                                                                                                               ; TYPE: PRT
; ORGANISM: Hepatitis C virus
US-10-268-561-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-268-561-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT
                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ouery Match 7.9%; Score 15; DB 14; Length 15; Best Local Similarity 100.0%; Pred. No. 2.8e-06; Matches 15; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-268-561-5
Sequence 5, Application US/10268561
Publication No. US20030148333A1
GENERAL INFORMATION:
TITLE OF INVENTION: HCV Anti-Core Monoclonal Antibodies
FILE REFERENCE: CDS0286
CURRENT APPLICATION NUMBER: US/10/268,561
CURRENT APPLICATION NUMBER: US 60/337453
PRIOR APPLICATION NUMBER: US 60/337453
PRIOR PLILING DATE: 2002-10-0
PRIOR PLILING DATE: 2001-11-05
NUMBER OF SEQ ID NOS: 19
SOFTWARE: Patentin version 3.1
SEQ ID NO 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Indels
                                                                                                                                                                                                     TITLE OF INVENTION: HCV Anti-Core Monoclonal Antibodies
FILE REPRENCE: CDS0286
CURRENT PILING DATE: 2002-10-10
PRIOR APPLICATION NUMBER: US 60/337453
PRIOR FILING DATE: 2001-11-05
NUMBER OF SEQ 1D NOS: 19
SOFTWARE: Patentin version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 6, Application US/10268561
Publication No. US20030148333A1
GENERAL INFORMATION:
APPLICANT: Ortho-Clinical Diagnostics, Inc.
TITLE OF INVENTION: HCV Anti-Core Monoclonal Antibodies
FILE REFERENCE: CD80286
CURRENT APPLICATION NUMBER: US/10/268,561
CURRENT FILING DATE: '2002-10-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 7.9%; Score 15; DB 14; L
Best Local Similarity 100.0%; Pred. No. 2.8e-06;
Matches 15; Conservative 0; Mismatches 0;
                                                                                                                                                Sequence 4, Application US/10268561
Publication No. US20030148333A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 QIVGGVYLLPRRGPR 15
      34 VYLLPRRGPRLGVRA 48
                           1 VYLLPRRGPRLGVRA 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29 QIVGGVYLLPRRGPR 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         39 RRGPRLGVRATRKTS 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 RRGPRLGVRATRKTS 15
                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
ORGANISM: Hepatitis C virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Hepatitis C virus
                                                                                                                               US-10-268-561-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-268-561-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-268-561-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 4
US-10-268-561-6
                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 4
LENGTH: 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH:
                                                                                                            RESULT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ద
        ठे
                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 7.9%; Score 15; DB 14; Length 15; Best Local Similarity 100.0%; Pred. No. 2.8e-06; Matches 15; Conservative 0; Mismatches 0; Indels
Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 15;
                                                                                                                                                                                                                                          US-10-268-561-9
; Sequence 9, Application US/10268561
; Publication No. US2030148333A1
; GENERAL INFORMATION:
; APPLICANT: Ortho-Clinical Diagnostics, Inc.
; TITLE OF INVENTION: HCV Anti-Core Monoclonal Antibodies
; FILE REFERENCE: CDS0286
; CURRENT APPLICATION NUMBER: US/10/268,561
; CURRENT APPLICATION NUMBER: US 60/337453
; PRIOR FILING DATE: 2001-11-05
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO
; LENGTH: 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-268-561-10

| Sequence 10, Application US/10268561
| Sequence 10, Application US/10268561
| Publication No. US20030148333A1
| GENERAL INFORMATION:
| APPLICANT: Ortho-Clinical Diagnostics, Inc.
| TITLE OF INVENTION:
| FILE REFERENCE: CDS0286
| CURRENT APPLICATION NUMBER: US/10/268,561
| CURRENT APPLICATION NUMBER: US 60/337453
| PRIOR PILING DATE: 2001-11-05
| NUMBER OF SEQ ID NOS: 19
| SOFTWARE: PatentIn version 3.1
| SEQ ID NO 10
                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 7.9%; Score 15; DB 14; L
Best Local Similarity 100.0%; Pred. No. 2.8e-06;
Matches 15; Conservative 0; Mismatches 0;
  Query Match 7.9%; Score 15; DB 14; I
Best Local Similarity 100.0%; Pred. No. 2.8e-06;
Matches 15; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 AQPGYPWPLYGNEGC 15
                                                                                                   48 ATRKTSERSOPRGRR 62
                                                                                                                                                 1 ATRKTSERSOPRGRR 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               77 AQPGYPWPLYGNEGC 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
ORGANISM: Hepatitis C virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Hepatitis C virus US-10-268-561-10
```

Gapa

ö

```
7.9%; Score 15; DB 14; Length 15; 100.0%; Pred. No. 2.8e-06; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 15; DB 14; Length 15;
Pred. No. 2.8e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 7.9%; Score 15; DB 14; Length 15; Best Local Similarity 100.0%; Pred. No. 2.8e-06; Matches 15; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 6, Application US/10268569;
Publication No. US20030152965A1
GENERAL INFORMATION:
TITLE OF INVENTION:
TITLE OF INVENTION: HCV Core Protein Sequences
CURRENT PILLIAND NUMBER: US/10/268,569
CURRENT FILLING DATE: 2002-10-10
PRIOR PILING DATE: 2001-11
PRIOR PILING DATE: 2001-11-11
NUMBER OF SEQ ID NOS: 19
SOFTWARE: Patentin version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 9, Application US/10268569;
Publication No. US20030152965A1;
GENERAL INFORMATION:
FAPPLICATURE OF INVENTION: HCV Core Protein Sequences;
FILE REPREBNCE: CDS-0288;
CURRENT APPLICATION NUMBER: US/10/268,569;
CURRENT FILING DATE: 2002-10-10;
PRIOR APPLICATION NUMBER: 60/347,303
; WINDER FILING DATE: 2001-11-11;
NUMBER OF SEQ ID NOS: 19;
SOFTWARE: PATENTIN VERSION 3.1
                                                                                                                                                                                                           Query Match 7.9%; Score 15; DB Best Local Similarity 100.0%; Pred. No. 2.8 Matches 15; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match

Best Local Similarity 100.0%; Pr
Matches 15; Conservative 0;
    PRIOR FILING DATE: 2001-11-11
NUMBER OF SEQ ID NOS: 19
SOFTWARE: PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                           1 RRGPRIGVRATRKTS 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 ATRKTSERSOPRGRR 15
                                                                                                                                                                                                                                                                                                    39 RRGPRLGVRATRKTS 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                48 ATRKTSERSOPRGRR 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           77 AQPGYPWPLYGNEGC 91
                                                                      SEQ ID NO 5

LENGTH: 15

TYPE: PRT

CORGANISM: Hepatitis C virus

US-10-268-569-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT CAGANISM: Hepatitis C virus US-10-268-569-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
ORGANISM: Hepatitis C virus
                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 10
US-10-268-569-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 11
US-10-268-569-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-268-569-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 9
                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                           요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 7.9%; Score 15; DB 14; Length 15; Best Local Similarity 100.0%; Pred. No. 2.8e-06; Matches 15; Conservative 0; Mismatches 0; Indels
                                                                                                                         Sequence 18, Application US/10268561
) Publication No. US20030148333A1
) GENERAL INFORMATION:

A PPLICANT: Ortho-Clinical Diagnostics, Inc.

TILE OF INVENTION: HCV Anti-Core Monoclonal Antibodies
FILE REFERENCE: CD80286

CURRENT APPLICATION NUMBER: US/10/268,561

CURRENT PILING DATE: 2002-10-10

PRIOR PHING DATE: 2001-11-05

NUMBER OF SEQ ID NOS: 19

SOFTWARE: Patentin version 3.1

SEQ ID NO 18

LENGTH: 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 7.9%; Score 15; DB 14; L
Best Local Similarity 100.0%; Pred. No. 2.8e-06;
Matches 15; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 4, Application US/10268569;
Publication No. US20030152965A1;
GENERAL INFORMATION:
FAPLICANT: Ortho-Clinical Diagnostics, Inc.
TITLE OF INVENTION: HCV Core Protein Sequences;
CURRENT APPLICATION NUMBER: US/10/268,569;
CURRENT PILING DATE: 2002-10-10;
PRIOR FILING DATE: 2001-11-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 5, Application US/10268569
Publication No. US20030152965A1
GENERAL INFORMATION:
TITLE OF INVENTION: HCV Core Protein Sequences
FILE REFERENCE: CDS-0288
CURRENT FAPLICATION NUMBER: US/10/268,569
CURRENT FLING DATE: 2002-10-10
PRIOR APPLICATION NUMBER: 60/347,303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           166 TGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS: 19
SOFWARE: Patentin version 3.1
SEQ ID NO 4
LENCTH: 15
1 YGNEGCGWAGWLLSP 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 TGNLPGCSFSIFLLA 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29 QIVGGVYLLPRRGPR 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 QIVGGVYLLPRRGPR 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; TYPE: PRT
; ORGANISM: Hepatitis C virus
US-10-268-569-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; TYPE: PRT
; ORGANISM: Hepatitis C virus
US-10-268-561-18
                                                                                                                US-10-268-561-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-268-569-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-268-569-4
                         а
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
```

ö

Gaps

ö

0; Indels

ö

Gaps

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1, Application US/10651165
Publication No. US20040047877A1
GENERAL INFORMATION:
APPLICANT: LEROUX-ROELS, Geert
APPLICANT: DELEYS, Robert
APPLICANT: MERTENS, Geert
TITLE OF INVENTION: VIRUS
TITLE OF INVENTION: VIRUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7.9%; Score 15; DB 14; Length 15; 100.0%; Pred. No. 2.8e-06; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 7.9%; Score 15; DB 14; Length 15; Best Local Similarity 100.0%; Pred. No. 2.8e-06; Matches 15; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 13
US-10-268-569-18
; Sequence 18, Application US/10268569
; Publication No. US2003015296581
; GENERAL INFORMATION:
; APPLICANT: Ortho-Clinical Diagnostics, Inc.
; TITLE OF INVENTION: HCV Core Protein Sequences;
; FILE REFERENCE: CDS-0288
; CURRENT APPLICATION NUMBER: US/10/268,569
; CURRENT FILING DATE: 2002-10-10
; PRIOR FILING DATE: 2001-11-11
; NUMBER OF SEQ ID NOS: 19
; SEQ ID NO 18
; SEQ ID NO 18
                                                                                                                                            GENERAL INFORMATION:
APPLICANT: Ortho-Clinical Diagnostics, Inc.
TITLE OF INVENTION: HCV Core Protein Sequences
FILE PEFERENCE: CDS-0288
CURRENT APPLICATION NUMBER: US/10/268,569
CURRENT APPLICATION NUMBER: 60/347,303
FRIOR APPLICATION NUMBER: 60/347,303
FRIOR FILING DATE: 2001-11-11
NUMBER OF SEQ ID NOS: 19
SOFTWARE: Patentin version 3.1
SEQ ID NO 10
LENGTH: 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILE REFERENCE: 2551-94
CURRENT APPLICATION NUMBER: US/10/651,165
                                                                                                           ; Sequence 10, Application US/10268569; Publication No. US20030152965A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    166 TGNLPGCSFSIFLLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              86 YGNEGCGWAGWLLSP 100
1 AQPGYPWPLYGNEGC 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 YGNEGCGWAGWLLSP 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 TGNLPGCSFSIFLLA 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT; ORGANISM: Hepatitis C virus US-10-268-569-18
                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: PRT ORGANISM: Hepatitis C virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 100.0
Matches 15; Conservative
                                                                                        US-10-268-569-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-268-569-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 14
US-10-651-165-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
```

```
JARLEANT: De Leys, Robert

TITLE OF INVENTION: PROCESS FOR THE DETERMINATION OF PEPTIDES CORRESPONDING

TITLE OF INVENTION: TO IMMUNOLOGICALLY IMPORTANT EPITOPES AND THEIR USE IN

TITLE OF INVENTION: A PROCESS FOR DETERMINATION OF ANTIBODIES OF

TITLE OF INVENTION: BIOTINYLATED PEPTIDES CORRESPONDING TO IMMUNOLOGICALLY IMPORTANT

TITLE OF INVENTION: BIOTINYLATED PEPTIDES CORRESPONDING TO IMMUNOLOGICALLY IMPORTANT

TITLE OF INVENTION: BIOTINYLATED PEPTIDES CORRESPONDING THEM AND COMPOSITIONS

TITLE OF INVENTION: CONTAINING THEM

FILE REFERENCE: 2752-11

CURRENT FAPLICATION NUMBER: US/10/621,675

CURRENT FILING DATE: 1996-09-30

PRIOR APPLICATION NUMBER: 09/146,028

PRIOR PELING DATE: 1993-101-28

PRIOR APPLICATION NUMBER: PCT/EP93/00517

PRIOR APPLICATION NUMBER: EP 92400598.6

PRIOR FILING DATE: 1993-03-06

PRIOR FILING DATE: 1992-03-06

PRIOR FILING DATE: 1993-03-06

PRIOR FILING DATE: 1993-03-06

PRIOR FILING DATE: 1993-03-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                       Gарв
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                    Score 15; DB 15; Length 15;
Pred. No. 2.8e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 15; DB 17; Pred. No. 2.8e-06; D; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                      7.9%; Scc...
100.0%; Pred. No. ...
0; Mismatches
CURRENT FILING DATE: 2003-09-02
PRIOR APPLICATION NUMBER: US/08/974,690C
PRIOR FILING DATE: 1997-11-19
PRIOR PILING DATE: 1994-028
PRIOR FILING DATE: 1994-0-28
PRIOR FILING DATE: 1993-11-04
PRIOR FILING DATE: 1993-11-04
NUMBER OF SEQ ID NOS: 286
SOFTWARE: PATENTIN VETSION 3.1
SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Search completed: July 15, 2005, 10:40:08 Job time : 162 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 134, Application US/10621675
Publication No. US20050049398A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7.9%; Scc.
100.0%; Pre
                                                                                                                                                                                                                                                                                                                                                                                                                                                   S PKPORKTKRNTNRRP 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 PKPORKTKRNTNRRP 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5 PKPQRKTKRNTNRRP 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 PKPORKTKRNTNRRP 15
                                                                                                                                                                                                                                                             TYPE: PRT ORGANISM: hepatitis C virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; ORGANISM: Hepatitis C virus US-10-621-675-134
                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 100.0
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-621-675-134
                                                                                                                                                                                                                                                                                                           US-10-651-165-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠ
```

5.1.6 Compugen Ltd. GenCore version Copyright (c) 1993 - 2005

protein search, using sw model OM protein Run on:

July 15, 2005, 10:07:50 ; Search time 40 Seconds (without alignments) 459.435 Million cell updates/sec

US-09-084-691B-206 191

1 MSTLPKPQRKTKRNTNRRPT......CSFSIFLLALLSCLTTPASA 191 Title: Perfect score: Sequence:

OLIGO Gapop 60.0 , Gapext 60.0 Scoring table:

283416 seqs, 96216763 residues Searched:

0 Word size :

2523 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 15

Post-processing: Listing first 45 summaries

PIR 79:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	glutathione peroxi	H+-transporting tw	omega-gliadine 3 -	urease (EC 3.5.1.5	achatin-I - giant	cocoonase (EC 3.4.	seed protein ws-5	. hypothetical prote	_	spectrin alpha cha	tachykinin IV - mi	tryptase (EC 3.4.2	cytochrome-c oxida	cytochrome-c oxida	substance P - guin	substance P - hors	probable antigen 5	protein kinase C i	T-cell receptor ga		transforming prote	Achatina cardio-ex	cytochrome-c oxida	cytochrome-c oxida	cytochrome-c oxida	cytochrome-c oxida	aminotransferase c	napin small chain	glutamate-ammonia
SUMMARIES		929	171	148	389	480	168	491	541	502	920	04M	190	075	212	654	0	E41476	044	D41946	304	590	662	244	248	081	078	124	337	043
•	8	A38929	S12171	PN0148	B35389	A32480	B61168	E61491	B33541	G58502	PC7076	ECLO4M	S24190	T17075	T14212	A60654	SPHO	E41	PN0044	D41	I52304	A38590	A34662	T12244	T12248	T17081	T17078	PC2124	S70337	801043
	DB	7	~	~	~	~	~	~	~	N	~	-	~	~	~	-	-	7	~	~	~	~		~			~	4	7	7
	Query Match Length DB	13	14	15	15	4	S	7	7	6	6	10	10	. 10	10	11	11	11	11	11	11	11	11	11	11	11	11	11	12	13
عان	Query	2.6	2.6	2.6	2.6	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
	Score	5	ហ	ហ	S	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Result No.	-	7	m	4	S	9	7	80	o,	10	11	12	13	14	15	16	17	18		20	21	22	23	24	25	26	27	28	29

mastoparan M - hor mastoparan - yello superoxide dismuta hyocyamine (6s)-di spermadhesin AWN h sperm motility inh malate dehydrogena thrombospondin 2 - leukocyte elastase gene c-Ki-ras prot T-cell antigen rec C-Ki-ras - hamster pyruvate kinase (E formate dehydrogen hyoscyamine (6s)-d 22K protein pl, mi
QWVHMM QWWAVV QWWAVV S74128 FA0094 S58426 S58426 S66334 B60683 D45474 S24159 I155478 I165478 PN0052 SS9492 PN0164
попопопопопоп
444444460000000000
작 작 작 작 작 작 작 작 작 작 작 작 작 작
64444444444444444444444444444444444444

ALIGNMENTS

Justificatione peroxidase (EC 1.11.1.9) - sheep (fragment)
C;Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
C;Date: 23-Mar-1995 #sequence_revision 23-Mar-1995 #text_change 09-Jul-2004
C;Date: 23-Mar-1995 #sequence_revision 23-Mar-1995 #text_change 09-Jul-2004
C;Accession: A18929
R;Gettins, P.; Dyal, D.; Crews, B.
Arch. Biochem. Biophys. 294, 511-518, 1992
A;Title: Selenium-dependent glutathione peroxidases from ovine and bovine erythrocytes CA;Reference number: S21712; MUID:92231574; PMID:1567207 A;Cross-references: UNIPROT:Q7M355 C;Superfamily: glutathione peroxidase C;Keywords: oxidoreductase A;Status: preliminary A;Molecule type: protein A;Residues: 1-13 <GET>

; 0 Query Match 2.6%; Score 5; DB 2; Length 13; Best Local Similarity 100.0%; Pred. No. 4.6e+02; Matches 5; Conservative 0; Mismatches 0; Indels

ö

Gaps

148 AAALA 152 AAALA 6 ~ ઠે g

H-transporting two-sector ATPase (BC 3.6.3.14) lipid-binding protein - fission yeast (S C;Species: mitochondrion Schizosaccharomyces pombe C;Species: mitochondrion Schizosaccharomyces pombe C;Date: 18-Feb-1994 #sequence_revision 10-Nov-1995 #text_change 09-Jul-2004 C;Accession: 51271
R;Massardo, D.R.
Nucleic Acids Res. 18, 6429, 1990
A;Title: Nucleotide sequence of the genes encoding tRNA(his), tRNA(pro) and tRNA(gln) in A;Reference number: 512171
A;Accession: 512171
A;Accession: 512171
A;Accession: Si2171
A;Accession: S

A;Genome: mitochondrion A;Genetic code: SGC2 C;Keywords: hydrolase; mitochondrion

0; Query Match 2.6%; Score 5; DB 2; Length 14; Best Local Similarity 100.0%; Pred. No. 4.9e+02; Matches 5; Conservative 0; Mismatches 0; Indels

ö

Gaps

126 LTCGF 130

ઠે

Gaps

ö

셤

```
A,Title: Effect of the D-Phe(2) residue on molecular conformation of an endogenous neuro (H-Gly-Phe-Ala-Asp-OH).

A,Reference number: A44691; MUID:92354723; PMID:1644179
A,Reference number: A44691; MUID:92354723; PMID:1644179
A,Contents: annotation; X-ray crystallography, 0.85 angstroms
A,Note: achain-II has L-phenylalanine
C;Keywords: D-amino acid
F;2/Modified site: D-phenylalanine (Phe) #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C;Species: Psophocarpus tetragonolobus (winged bean)
C;Date: 07-Oct-1994 #sequence_revision 07-Oct-1994 #text_change 07-Oct-1994
C;Accession: E61491
R;Hirano, H.
J; Protein Chem. 8, 115-130, 1989
A;Title: Microsequence analysis of winged bean seed proteins electroblotted from two-dim A;Reference number: A61491; MUID:89351606; PMID:2765119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C;Species: Antheraea pernyi (Chinese oak silkmoth)
C;Date: 10-Mar-1994 #sequence_revision 10-Mar-1994 #text_change 07-May-1999
C;Accession: BG1168
R;Kramer, K.J.; Felsted, R.L.; Law, J.H.
J. Blol. Chem. 248, 3021-3028, 1973
A;Title: Cocconase. V. Structural studies on an insect serine protease.
A;Title: Cocconase. V. Structural studies on A;Reference number: A61168; MUID:73166540; PMID:4735570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hypothetical protein (T1 5' region) - mouse
C;Species: Mus musculus (house mouse)
C;Date: 21-Feb-1990 #sequence_revision 21-Feb-1990 #text_change 30-Sep-1993
C;Accession: B33541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Residues: 1-5 <RRA>
C;Keywords: hydrolase; serine proteinase; zymogen
F;1-5/Product: cocoonase (fragment) #status experimental <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2.1%; Score 4; DB 2; Length 7;
100.0%; Pred. No. 2.8e+05;
tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                            2.1%; Score 4; DB 2; Length 4;
100.0%; Pred. No. 2.8e+05;
Attive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 2.1%; Score 4; DB 2; Length 5; Best Local Similarity 100.0%; Pred. No. 2.8e+05; Matches 4; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cocoonase (EC 3.4.21.-) - Chinese oak silkmoth (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     seed protein ws-5 - winged bean (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C; Keywords: glycoprotein; seed
                                                                                                                                                                                                                                                                                   Query Match 2.1
Best Local Similarity 100.
Matches 4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Status: preliminary
A;Molecule type: protein
A;Residues: 1-7 <HIR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                     129 GFAD 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |||||
||PGGG 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25 PGGG 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30 IVGG 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GFAD 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IVGG 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Accession: B61168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Accession: E61491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B61168
                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                            C;Species: Aegilops longissima
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 07-May-1999
C;Cession: PN0148
C;Accession: PN0148
B;Odintsova, T.1; Egrov, T.A.
Biokhimia 55, 509-516, 1990
A;Title: N-Texminal sequences of omega-gliadins of Aegilops longissima: On the origin of A;Reference number: PN0146; MUID:90283493; PMID:2354218
A;Melecule type: protein
A;Residues: 1-15. Coll-
A;Residues: 1-15. Coll-
A;Experimental source: strain K-202
A;Note: 11-Gln was also found
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         achatin-I - giant African snail

N;Contains: achatin-II

N;Contains: achatin-II

N;Contains: achatin-II

C;Species: Achatina fulica (giant African snail)

C;Species: Achatina fulica (giant African snail)

C;Accession: A32480

C;Accession: A32480

R;Kamatani, Y.; Minakata, H.; Kenny, P.T.M.; Iwashita, T.; Watanabe, K.; Funase, K.; Sun Biochem. Biophys. Res. Commun. 160, 1015-1020, 198

A;Ricerance number: A32480

A;Reference number: A32480; MUD:89273551; PMID:2597281

A;Reference number: A32480

A;Residues: I-4 <KAM>
A;Residues: I-4 <KAM>
A;Cross-references: UNIPROT:P35904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Note: stereochemistry of the active form confirmed by chemical synthesis
R;Ishida, T.; In, Y.; Inoue, M.; Yasuda-Kamatani, Y.; Minakata, H.; Iwashita, T.; Nomotc
FEBS Lett. 307, 253-256, 1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C; Accession: B35389
R; Hu, L.T.; Nicholson, E.B.; Jones, B.D.; Lynch, M.J.; Mobley, H.L.T.
B35389
A.Title: Morganella morganii urease: purification, characterization, and isolation of g
A.Title: Morganella morganii urease: purification, characterization, and isolation of g
A; Reference number: A35389; MUID: 90264298; PMID: 2345135
A; Accession: B35389
A; Ascatuse preliminary
A; Molecule type: protein
A; Residues: 1.15 < HUA.
A; Cross-references: UNIPROT: P17338
C; Keywords: hydrolase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          urease (EC 3.5.1.5) 15K chain - Morganella morganii (fragment)
C;Specise: Morganella morganii
C;Date: 31-Aug-1990 #sequence_revision 31-Aug-1990 #text_change 09-Jul-2004
C;Accession: B35389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
2.6%; Score 5; DB 2; Length 15;
Best Local Similarity 100.0%; Pred. No. 5.2e+02;
Matches 5; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
2.6%; Score 5; DB 2; Len
Best Local Similarity 100.0%; Pred. No. 5.2e+02;
Matches 5; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                   omega-gliadine 3 - Aegilops longissima (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98 LSPRG 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              143 PLGGV 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8 PLGGV 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LSPRG 8
```

ò g 셤

ò

ö

Gaps

ö

ö

Gaps

; 0

```
R;Schoofs, L.; Holman, G.M.; Hayes, T.K.; Kochansky, J.P.; Nachman, R.J.; De Loof, A. Regul. Pept. 31, 199-212, 1990
A;Title: Locustatachykinin III and IV: two additional insect neuropeptides with homology
A;Reference number: A60073; MUID:91219696; PMID:2132575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cytochrome-c oxidase (EC 1.9.3.1) chain I - Chamaeleo fischeri mitochondrion (fragment) C; Species: mitochondrion Chamaeleo fischeri C; Spacession: T17075
R; Macey, J.R.; Larson, A.; Ananjeva, N.B.; Papenfuss, T.J.
J; Mol. Bvol. 44, 660-674, 1997
A; Title: Evolutionary shifts in three major structural features of the mitochondrial gen A; Reference number: Z18674; MUID:97315309; PMID:9169559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Cross-references: UNIPROT:079912; EMBL:U82688; NID:g3603112; PID:g3603115; PIDN:AAC622
                                                                                              N;Alternate names: locustatachykinin IV
C;Species: Locusta migratoria (migratory locust)
C;Date: 31-Mar-1993 #sequence_revision 31-Mar-1993 #text_change 09-Jul-2004
C;Accession: B60073
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C;Species: Bos primigenius taurus (cartle)
C;Date: 19-Mar-1997 #sequence_revision 18-Aug-2000 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                        A;Accession: B60073
A;Molecule type: protein
A;Rolecule type: protein
A;Rolecule type: protein
A;Rolecule type: protein
A;Cross-references: UNIPROT:P30250
C;Superfamily: tachykinin
C;Keywords: amidated carboxyl end; neuropeptide; tachykinin
P;10/Modified site: amidated carboxyl end (Arg) #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 2.1%; Score 4; DB 1; Length 10; Best Local Similarity 100.0%; Pred. No. 3.6e+03; Matches 4; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 2.1%; Score 4; DB 2; Length 10; Best Local Similarity 100.0%; Pred. No. 3.6e+03; Matches 4; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C,Accession: S24190
R;Fiorucci, L.; Brba, F.; Ascoli, F.
Biol. Chem. Hoppe-Seyler 373, 483-490, 1992
A;Title: Bovine tryptase: purification and characterization. A;Reference number: S24190; MUID:92384956; PMID:1515079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-10 <MAC>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A,Cross-references: UNIPROT:08HYJ2
C,Superfamily: trypsin; trypsin homology
C,Keywords: hydrolase; serine proteinase; zymogen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tryptase (EC 3.4.21.59) - bovine (fragment)
                                                                     - migratory locust
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A,Status: preliminary
A,Molecule type: protein
A,Residues: 1-10 <FIO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Genome: mitochondrion A;Note: COI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   153 HGVR 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HGVR 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30 IVGG 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IVGG 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Accession: S24190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C, Genetica:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C; Accession: PC7076
R: Taugita, A.; Kawakami, T.; Uchida, T.; Sakai, T.; Kamo, M.; Matsui, T.; Watanabe, Y.; Electrophoresis 21, 1853-1871, 2000
A; Title: Proteome analysis of mouse brain: Two-dimensional electrophoresis profiles of t A; Reference number: PC7072
A; Accession: PC7076
A; Residues: 1-9 < TSU3
A; Residues: 1-9 < TSU3
A; Residues: 1-9 < TSU3
A; Cross-references: UNIRROT: P16546
A; Experimental source: strain C57BL/6Cr Slc, male; brain, striatum
C; Keywords: brain
R;Klemenz, R.; Hoffmann, S.; Werenskiold, A.K.

Proc. Natl. Acad. Sci. U.S.A. 86, 5708-5712, 1989

A;Title: Serum- and oncoprotein-mediated induction of a gene with sequence similarity A;Reference number: A33541; MUID:89345536; PMID:2527364

A;Accession: B33541

A;Accusus: preliminary

A;Molecule type: mRNA

A;Molecule type: mRNA

A;Residues: 1-7 < KLE>

A;Cross-references: GB:M24843
                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             spectrin alpha chain, non-erythroid - mouse (fragment)
N;Alternate names: fodrin alpha chain
C;Species: Wus musculus (house mouse)
C;Date: 18-Aug-2000 #sequence_revision 18-Aug-2000 #text_change 09-Jul-2004
C;Accession: PC7076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .Species: unidentified bacterium
.Date: 07-Feb-1997 #sequence_revision 07-Feb-1997 #text_change 09-Jul-2004
.Accession: G58502
                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    - unidentified bacterium (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C;Species: unidentified bacterium
C;Species: unidentified bacterium
C;Date: 07-Feb-1997 #sequence_revision 07-Feb-1997 #text_change C;Accession: G58502
R;Binette, JP: Binette, M.B.
submitted to the Protein Sequence Database, October 1996
A;Pescription: The proteins of kidney and gallbladder stones.
A;Reference number: A58501
A;Accession: G58502
A;Status: preliminary
A;Molecule type: protein
A;Residues: 19 - SBLN
A;Cross-references: UNIPROT:Q7M139
A;Cross-references: UNIPROT:Q7M139
A;Experimental source: human kidney stone, bladder stone
A;Note: a secondary sequence AAKENPXD was also found
                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity 100.0%; Pred. No. 2.8e+05; 4; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2.1%; Score 4; DB 2; Length 9;
100.0%; Pred. No. 2.8e+05;
ive 0; Mismatches 0; Indeli
                                                                                                                                                                                                                                                                                                                  Length 7;
                                                                                                                                                                                                                                                                                                            2.1%; Score 4; DB 2; Len
100.0%; Pred. No. 2.8e+05;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 kidney and bladder stone protein
                                                                                                                                                                                                                                                                                                     Query Match 2.1
Best Local Similarity 100.
Matches 4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity 100.
Matches 4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                    113 RRRS 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21 DVKF 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  48 ATRK 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RRRS 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 DVKF 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATRK 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
```

ô

C; Keywords: mitochondrion; oxidoreductase

```
cytochrome-c oxidase (EC 1.9.3.1) chain I - Uromastyx acanthinurus mitochondrion (fragme C; Species: mitochondrion Uromastyx acanthinurus
C; Species: In 14212
R; Macey, J. R.; Larson, A.; Ananjeva, N. B.; Fang, Z.; Papenfuss, T.J.
Mol. Biol. Evol. 14, 91-104, 1997
A; Title: Two novel gene orders and the role of light-strand replication in rearrangement
A; Reference number: Z17789; MUID:97153826; FMID:9000757
A; Accession: T14212
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: DNA
A; Residues: 1-10 < MAC>
A; Cross-references: UNIPROT:P92762; EMBL:U71325; NID:g1753264; PID:g1753267; PIDN:AAC622
C; Genefics:
A; Genome: mitochondrion
A; Note: COl
C; Keywords: mitochondrion; oxidoreductase
                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         substance P - guinea pig
C;Species: Cavia porcellus (guinea pig)
C;Date: 14-May-1993 #sequence_revision 27-Jun-1994 #text_change 09-Jul-2004
C;Accession: A60654
                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Vincession: Accession: Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
2.1%; Score 4; DB 2; Length 10;
Best Local Similarity 100.0%; Pred. No. 3.6e+03;
Matches 4; Conservative 0; Mismatches 0; Indels
Query Match
2.1%; Score 4; DB 2; Length 10;
Best Local Similarity 100.0%; Pred. No. 3.6e+03;
Matches 4; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          h 2.1%; Score 4; DB 1; Length 11; Similarity 100.0%; Pred. No. 3.9e+03; 4; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Search completed: July 15, 2005, 10:27:21
Job time : 42 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                96 WLLS 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       96 WLLS 99
                                                                                                                                                                                                                                                                         6 WLLS 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6 WLLS 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5 PKPQ 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |||||
2 PKPQ 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ద
                                                                                                                                                                                                          ठ
                                                                                                                                                                                                                                                                                              엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ద
```

hepatitis chepatitis c

Q81794 Q81795 Q81797 Q81799 Q81800 Q81800 Q81315 Q67315 Q67316 Q67316 Q67316 Q67316

gorilla gor tityus disc homo sapien ovis aries

Run on

```
SEQUENCE FROM N.A.

MEDLINE=92279243; PubMed=1317578;

MEDLINE=92279243; PubMed=1317578;

Bukh J., Purcell R.H., Miller R.H.;

"Sequence analysis of the 5' noncoding region of hepatitis C virus.";

Proc. Natl. Acad. Sci. U.S.A. 89:4942-4946(1992).

EMBL; M84877; AAA45684.1; -.

PEDLIST OF COUNTY OF COUNTY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA stage; Flaviviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   stage; Flaviviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6.8%; Score 13; DB 2; Le
100.0%; Pred. No. 3.4e-05;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Viruses; ssRNA positive-strand viruses, no Hepacivirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6
                                                                                                                                                                                                                                                                                                             ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Viruses; ssRNA positive-strand viruses, Hepacivirus. NCBI_TAXID=11103;
Q81794
Q81795
Q81799
Q81799
Q81799
Q81781
Q67215
Q67316
Q67316
Q67310
Q67310
Q67310
Q67310
Q67310
Q67310
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
MEDLINE=92279243; PubMed=1317578;
Bukh J., Purcell R.H., Miller R.H.;
                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                     Q7M355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-NOV-1996 (TrEMBLrel. 01, C
01-NOV-1996 (TrEMBLrel. 01, L
01-JUN-2003 (TrEMBLrel. 24, L
Polyprotein (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                               01,
01,
24,
     000000000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity 100.
nes 13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (TrEMBLrel. (TrEMBLrel.
     (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MSTLPKPQRKTKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (Fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hepatitis C virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hepatitis C virus
 NCBI_TaxID=11103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Polyprotein (Frag
Name=polyprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                           Q81766;
01-NOV-1996
01-NOV-1996
01-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Polyprotein.
NON TER
     σοσοσος πουσοσο
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               081771
                                                                                                                                                                                                                                                                                                                                                                                                         081766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 2
                                                                                                                                                                                                                                                                                                                                                                 RESULT 1 081766 ... 081766 ... 081766 ... 081766 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 08176 ... 081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hepatitis
hepatitis
hepatitis
hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             hepatitis
hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     hepatitis
hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           hepatitis
hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hepatitis
hepatitis
                                                                                                                             July 15, 2005, 09:59:29; Search time 173 Seconds (without alignments) 565.359 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         hepatiti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hepatiti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     hepatiti
                                                                                                                                                                                                                                                     ......CSFSIFLLALLSCLTTPASA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       081771
081790
081761
081762
081763
081764
081769
081773
081773
081773
081773
081773
081773
081773
081773
081773
081773
081773
081773
081773
081773
081773
                     5.1.6
Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                             chosen parameters:
                                                                                                                                                                                                                                                                                                                                                   residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUMMARIES
                     GenCore version (c) 1993 - 2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           summaries
                                                                                             protein search, using sw model
                                                                                                                                                                                                                                                                                                         Gapop 60.0 , Gapext 60.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   081766
081771
081792
081795
081796
081761
081763
081763
081773
081773
081773
081773
081773
081773
081773
081773
081773
081773
081773
081773
081773
081773
                                                                                                                                                                                                                                                                                                                                                 1612378 segs, 512079187
                                                                                                                                                                                                           US-09-084-691B-206
191
1 MSTLPKPQRKTKRNTNRRPT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           UniProt_03:*
: uniprot_sprot:*
: uniprot_trembl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Post-processing: Listing first 45
                                                                                                                                                                                                                                                                                                                                                                                                                       hits satisfying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query
Match Length
                                     Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum DB seq length: 0 Maximum DB seq length: 15
                                                                                                                                                                                                                                                                                         OLIGO
                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                             Total number of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score
                                                                                                                                                                                                                                 score:
                                                                                                                                                                                                                                                                                       Scoring table:
                                                                                             OM protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Database :
                                                                                                                                                                                                                                                                                                                                                                                   Word size
                                                                                                                                                                                                                                                     Sequence:
                                                                                                                                                                                                                                                                                                                                                 Searched:
                                                                                                                                                                                                             Title:
Perfect
```

Result

ö

Gaps

ö

Indels

Gaps

; 0

셤

ò

```
Bukh J., Purcell R.H., Miller R.H.;
"Sequence analysis of the 5' noncoding region of hepatitis C virus.";
Proc. Natl. Acad. Sci. U.S.A. 89:4942-4946(1992).
EMBL, M84835; AAA45709.1; -.
GO; GO:0019029; C:viral capsid; IEA.
GO; GO:00105198; F:structural molecule activity; IEA.
InterPro; IPR002522; HCV capsid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.

MEDLINE=92279243; PubMed=1317578;

MEDLINE=92279243; PubMed=1317578;

Bukh J., Purcell R.H., Miller R.H.;

"Sequence analysis of the 5' noncoding region of hepatitis C virus.";

Proc. Natl. Acad. Sci. U.S.A. 89:4942-4946(1992).

EMBL, M84877; AAA45713.1; -.

EMBL, M84877; AAA45713.1; -.

GO, GO:001902198; F:structural molecule activity; IEA.

InterPro, IPR002522; HCV_capsid.

Prim, Pr01543; HCV_capsid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Name=polyprotein;
Hepatitis C virus.
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   6.8%; Score 13; DB 2; Length 13;
100.0%; Pred. No. 3.4e-05;
tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6.8%; Score 13; DB 2; Length 13;
100.0%; Pred. No. 3.4e-05;
.ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE 13 AA; 1571 MW; 464D1DE1A42FC763 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NON_TER 1 1 SEQUENCE 13 AA; 1571 MW; 464D1DE1A42FC763 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (TrEMBLrel. 01, C
(TrEMBLrel. 01, I
(TrEMBLrel. 24, I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MSTLPKPORKTKR 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MSTLPKPORKTKR 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MSTLPKPORKTKR 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MSTLPKPORKTKR 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity 100.
Matches 13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Polyprotein (Fragment).
Name=polyprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Polyprotein (Fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sest Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hepatitis C virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=11103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=11103;
                                                                                                                                                                                                                                                                                                                     Polyprotein.
NON TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-NOV-1996
01-NOV-1996
01-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Polyprotein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hepacivirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q81761
Q81761;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               081196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 5
081796
11D 0817796
11D 0817796
11-10 0817796
11-10 0817796
11-10 0817796
11-10 0817996
11-10 0817996
11-10 0817996
11-10 0817996
11-10 0817996
11-10 0817996
11-10 0817999
11-10 0817999
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 081799
11-10 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 6
                          RAT AND DR DR LAND DR KAN DR RAT AND DR RAT 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RXX OCC GREAT PACE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
MEDLINE=92279243; PubMed=1317578;
Bukh J., Purcell R.H., Miller R.H.;
"Sequence analysis of the 5' noncoding region of hepatitis C virus.";
Proc. Natl. Acad. Sci. U.S.A. 89:4942-4946(1992).
EMBL; M84864; AAA45707.1; S.A.
                  "Sequence analysis of the 5' noncoding region of hepatitis C virus.";
Proc. Natl. Acad. Sci. U.S.A. 89:4942-4946(1992).
EMBL; M84834; AAA45689.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Name-polyprotein;
Hepatitis C virus.
Viruses; sRRNA positive-strand viruses, no DNA stage; Flaviviridae;
Hepacivirus.
NCNI_TaxID=11103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hepatitis C virus.
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Hepacivirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .;
o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 6.8%; Score 13; DB 2; Length 13; Best Local Similarity 100.0%; Pred. No. 3.4e-05; Matches 13; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6.8%; Score 13; DB 2; Length 13;
100.0%; Pred. No. 3.4e-05;
ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                             NON TER 1 1 1
SEQUENCE 13 AA; 1571 MW; 464D1DE1A42FC763 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13 AA; 1571 MW; 464D1DE1A42FC763 CRC64;
                                                                                                                       GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0005198; F:structural molecule activity; IEA
InterPro; IPR002522; HCV_capsid.
Pfam; PF01543; HCV_capsid; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0005198; F:structural molecule activity; IEA
InterPro; IPR002522; HCV capsid.
Pfam; PF01543; HCV_capsid; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Preα. ...
tive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
MEDLINE=92279243; FubMed=1317578;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-NOV-1996 (TrEMBLrel. 01, 01-NOV-1996 (TrEMBLrel. 01, 01-JUN-2003 (TrEMBLrel. 24, Polyprotein (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-NOV-1996 (TrEMBLrel. 01, 01-NOV-1996 (TrEMBLrel. 01, 01-JUN-2003 (TrEMBLrel. 24, Polyprotein (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MSTLPKPQRKTKR 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MSTLPKPQRKTKR 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MSTLPKPQRKTKR 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MSTLPKPQRKTKR 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=11103;
                                                                                                                                                                                                                                                                                Polyprotein.
NON TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Polyprotein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q81792
Q81792;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         081190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Loc
Matches
```

ò

ö

Gaps

. 0

```
(TrEMBLrel. 01,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (TrEMBLrel. 01,
                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Polyprotein (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Polyprotein (Fragment).
                                                                                                                                                                                                                                                                                                                                                    5 PKPQRKTKR 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PKPORKTKR 13
                                                                                                                                                                                                                                                                                                                                                                                        5 PKPORKTKR 13
                                                                                                                                                                                                                                                                                      Local Similarity
nes 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PKPORKTKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=11103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Name=polyprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Name=polyprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=11103;
                                                                                                                                                                                                  Polyprotein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-NOV-1996
01-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hepacivirus
                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q81764
Q81764;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q81765
Q81765;
                                                                                                                                                                                                                                                                                                Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          081765
AC 088
AC 088
AC 088
BDT 011
BDT 011
BDE PO
GN NA
OC Vi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.

MEDLINE=92279243; PubMed=1317578;

Bukh J., Purcell R.H., Miller R.H.;

Bukh J., Purcell R.H., Miller R.H.;

Proc. Natl. Acad. Sci. U.5. noncoding region of hepatitis C virus.";

Proc. Natl. Acad. Sci. U.5. 89:4942-4946(1992).

EMBL; M84841; AAA45680.1; -

GO; GO:0019029; C:viral capsid; IEA.

GO; GO:005198; F:structural molecule activity; IEA.

InterPro; IPR002522; HCV capsid.

Pfam; PF01543; HCV_capsid. 1.
MEDLINE=92279243; PubMed=1317578;
Bukh J., Purcell R.H., Miller R.H.;
"Sequence analygis of the 5' noncoding region of hepatitis C virus.";
Proc. Natl. Acad. Sci. U.S.A. 89:4942-4946(1992).
EMBL; M84842; AAA45679.1; S.A.
                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Name=polyprotein;
Name=polyprotein;
Hepatitis C virus,
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Hepacivirus.
NCBI_TaxID=11103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                        Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 2; Length 13;
                                                                                                                                                                                            1 1
13 AA; 1572 MW; 464F97B1A42FC763 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 1
13 AA; 1572 MW; 464F97E1A42FC763 CRC64;
                                                                                          GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0005198; F:structural molecule activity; IEA
InterPro; IPR002522; HCV capsid.
Pfam; PF01543; HCV_capsid; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                      DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13 AA.
                                                                                                                                                                                                                                                  4.7%; Score 9; DB 2
100.0%; Pred. No. 0.3
:ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
4.7%; Score 9; DB 2
Best Local Similarity 100.0%; Pred. No. 0.3
Matches 9; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q81762;
01-NOV-1996 (TrEMBLrel. 01, C;
01-NOV-2096 (TrEMBLrel. 01, Li
01-JUN-2003 (TrEMBLrel. 24, Li
Polyprotein (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-NOV-1996 (TrEMBLrel. 01, 01-NOV-1996 (TrEMBLrel. 01, 01-JUN-2003 (TrEMBLrel. 24, Polyprotein (Fragment).
                                                                                                                                                                                                                                                                      Best Local Similarity 100.
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                  5 PKPQRKTKR 13
                                                                                                                                                                                                                                                                                                                                                                    5 PKPORKTKR 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5 PKPQRKTKR 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S PKPORKTKR 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hepatitis C virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hepacivirus.
NCBI_TaxID=11103;
                                                                                                                                                                        Polyprotein.
NON TER
SEQUENCE 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Polyprotein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NON TER
SEQÜENCE
                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q81763
Q81763;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    081762
                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 7
Q81762
ID Q817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 8
Q81763
    ò
                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DDT T DDT T BE SEE DDT T BE SEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
```

```
MEDLINE-92279243; PubMed=1317578;

Bukh J., Purcell R.H., Miller R.H.;

Bukh J., Purcell R.H., Miller R.H.;

Bukh J., Purcell R.H., Miller R.H.;

Bukh J., Adad. Sci. Uis., 89:4942-4946(1992),

EMBL; M94851; AAA45682.1; ---

GO; GO:001998; C:viral capsid, IEA.

GO; GO:001998; F:structural molecule activity; IEA.

Interpro, IPR002522; HCV capsid.
SEQUENCE FROM N.A.
MEDLINE=92279243; PubMed=1317578;
Bukh J., Purcell R.H., Miller R.H.;
"Sequence analysis of the 5' noncoding region of hepatitis C virus.";
Proc. Natl. Acad. Sci. U.S.A. 89:4942-4946(1992).
                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hepatitis C virus.
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hepatitis C virus.
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Hepacivirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
0
                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                      0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Indels
                                                                                                                                                                                                                                                                                                                                                       Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Polyprotein.
NON_TER 1 1 SEQUENCE 13 AA, 1572 MW; 464F97E1A42FC763 CRC64;
                                                                                                                                                                                                                                                                              GO, GO:0019028; C:viral capsid; IEA.
GO; GO:0005198; F:structural molecule activity; IEA.
Intervo; IPR002522; HCV capsid.
Efam; PF01543; HCV_capsid; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (TrEMBLrel. 01, Last sequence update)
(TrEMBLrel. 24, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (TrEMBLrel. 01, Last sequence update) (TrEMBLrel. 24, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                  4.7%; Score 9; DB 2;
100.0%; Pred. No. 0.3;
trive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4.7%; Score 9; DB 2;
100.0%; Pred. No. 0.3;
ative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ź
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Created)
```

Gaps

ö

셤

ò

```
MEDLINE=92279243; PubMed=1317578;
Bukh J., Purcell R.H., Miller R.H.;
Bukh J., Purcell R.H., Miller R.H.;
Buck J., Purcell R.H., Miller R.H.;
Sequence analysis of the 5' noncoding region of hepatitis C virus.";
Proc. Natl. Acad. Sci. U.S., 89:4942-4946(1992).
EMBL; M84855; AAA45686.1; -..
GO; GO:001909; C:viral capsid; IEA.
GO; GO:005198; E:structural molecule activity; IEA.
InterPro; IPR002222; HCV capsid.
Pfam; PP01543; HCV_capsid; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.

MEDLINE=92279243; PubMed=1317578;

Bukh J., Purcell R.H., Miller R.H.;

Sequence analysis of the 5. noncoding region of hepatitis C virus.";

Proc. Natl. Acad. Sci. U.S.A. 89:4942-4946(1992).

EMBL; M84856; AAA45687.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 1
13 AA; 1559 MW; 465365E1A42FC763 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                     Polyprotein.
NON TER 1 1 1 SEQUENCE 13 AA; 1572 MW; 464F97E1A42FC763 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0005198; F:structural molecule activity; IEA.
InterPro; IPR002522; HCV_capsid.
Pfam; PF01543; HCV_capsid; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4.7%; Score 9; DB 2;
100.0%; Pred. No. 0.3;
tive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4.7%; Score 9; DB 2;
100.0%; Pred. No. 0.3;
ative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-NOV-1996 (TrEMBLrel. 01, 01-NOV-1996 (TrEMBLrel. 01, 01-JUN-2003 (TrEMBLrel. 24,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Polyprotein (Fragment).
Name=polyprotein;
Hepatitis C virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Polyprotein (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5 PKPORKTKR 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5 PKPQRKTKR 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5 PKPORKTKR 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5 PKPQRKTKR 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity
Matches 9, Conserv
                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hepatitis C virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=11103;
NCBI_TaxID=11103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Name=polyprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Polyprotein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hepacivirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    081772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       081772;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           081769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 13
Q81769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        081772
1D Q8
1D Q8
DT Q1
DT 01
DT 01
DE PC
GN Na
OS He
ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A PAC OCC OCC OCT BE SEL BE SE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                    MEDLINE-92279243; PubMed=1317578;

Bukh J., Purcell R.H., Miller R.H.;

Bukh J., Purcell R.H., Miller R.H.;

Bukh J., Purcell R.H., Miller R.H.;

Bukh J., Madulysis of the 5' noncoding region of hepatitis C virus.";

Proc. Natl. Acad. Sci. U.S.A. 89:4942-4946(1992).

EMBL; M84859; AAA45683.1; -..

GO; GO:001998; C:viral capsid; IEA.

InterPro; IPR002522; HCV capsid.

InterPro; IPR002522; HCV capsid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.

MEDLINE=92279243; PubMed=1317578;

MEDLINE=92279243; PubMed=1317578;

Bukh J., Purcell R.H., Miller R.H.;

"Sequence analysis of the 5' noncoding region of hepatitis C virus.";

Proc. Natl. Acad. Sci. U.S.A. 89:4942-4946(1992).

EMBL; M84849; AAA45685.1; -.

EMBL; M84849; AAA45685.1; -.

GO; GO:0019029; C:viral capsid; IEA.

InterPro; IPR002522; HCV capsid.

Prof. Prof. Sci. Companies of the companies of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Hepacivirus.
NCBI_TaxID=11103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hepatitis C virus.
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Hepacivirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 13;
                                                                                                                                                                                                                                                                                                                                                                      NON TER 1 1 1
SEQUENCE 13 AA; 1572 MW; 464F97E1A42FC763 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4.7%; Score 9; DB 2;
100.0%; Pred. No. 0.3;
cive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4.7%; Score 9; DB 2
100.0%; Pred. No. 0.3
:ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q81768;
01-NOV-1996 (TrEMBLrel. 01, C;
01-NOV-1996 (TrEMBLrel. 01, L;
01-JUN-2003 (TrEMBLrel. 24, L;
Polyprotein (Fragment).
Name=polyprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-NOV-1996 (TrEMBLrel. 01, 01-NOV-1996 (TrEMBLrel. 01, 01-JUN-2003 (TrEMBLrel. 24, Polyprotein (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 100.
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity 100.
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5 PKPORKTKR 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5 PKPQRKTKR 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5 PKPORKTKR 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5 PKPORKTKR 13
                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hepatitis C virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Polyprotein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           081768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         081767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 11
Q81767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 12
Q81768
```

OC CE DIT

ò

ö

Gaps

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                         MEDLINE=92279243; PubMed=1317578;
Bukh J., Purcell R.H., Miller R.H.;
"Sequence analysis of the 5' noncoding region of hepatitis C virus.";
Proc. Natl. Acad. Sci. U.S.A. 89:4942-4946(1992)
EMBL; M84833; AAA45690.1; --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.

MEDLINE=922/9243; PubMed=1317578;

MEDLINE=922/9243; PubMed=1317578;

MEDLINE=922/9243; PubMed=1317578;

MEURINE=922/9243; PubMed=1317578;

Sequence analysis of the 5' noncoding region of hepatitis C virus.";

Proc. Natl. Acad. Sci. U.S.A. 89:4942-4946(1992).

EMBL; M84838; AAA45691.1; -.

EMBL; M84838; AAA45691.1; -.

EMBL; M84838; AAA45691.1; -.

EMBL; M84838; AAA45691.1; -.

EMBL; M84838; AAA5691.1; -.

EMBL; M84838; AAA5691.1; -.

EMBL; M86938; Colo1052.2; HCV_capsid; IEA.

InterPro; IPR002522; HCV_capsid.
                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Hepacivirus.
NCBI_TaxID=11103;
                                                                                                                                                                                                                                                                                                ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                              0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Indels
                                                                                                                                                                                                                                                              4.7%; Score 9; DB 2; Length 13; 100.0%; Pred. No. 0.3; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 2; Length 13;
                                                                                                                                                                                                  Polyprotein. 1
NON TER 1
SEQÜENCE 13 AA; 1572 MW; 464F97E1A42FC763 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Polyprotein.
NON TER 1 1 1
SEQÜENCE 13 AA; 1572 MW; 464F97E1A42FC763 CRC64;
                                                                                                                                     GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0005198; F:structural molecule activity; IEA.
InterPro; IPR002522; HCV_capsid.
Pfam; PF01543; HCV_capsid; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Polyprotein (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                         13 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4.7%; Score 9; DB 2
100.0%; Pred. No. 0.3
tive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 100.
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 100.
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                             5 PKPQRKTKR 13
                                                                                                                                                                                                                                                                                                                                                          5 PKPORKTKR 13
                                             SEQUENCE FROM N.A.
Hepacivirus.
NCBI_TaxID=11103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hepatitis C virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                     981773
                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 15
Q81773
ઠ
                                                                                                                                                                                                                                                                                                                                                          a
```

5 PKPQRKTKR 13

ઠે

Mis Paris Williams